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Reconnaissance Stream-Sediment Geochemistry of Death Valley

National Monument, California

by

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Introduction

To meet the goals of the National Mineral Resource Assessment Program (NAMRAP) of the U.S. Geological Survey (USGS), a geochemical survey of southern California was begun in 1991 to document the geochemical landscape of this region. The southern California area under study (Figure 1) includes desert lands (Basin and Range, Mojave Desert, Sonoran Desert, and Salton Trough physiographic provinces) and southern coastal mountain ranges (Transverse and Peninsular Ranges). This area is endowed with a wide variety of mineral wealth (Albers, 1981) including active mines producing gold, rare-earth elements, zeolites, borates, and a variety of other industrial minerals and construction material and has had significant past production of base-metals, iron, silver, tungsten, and mercury. Geochemical data for much of this region is inadequate or out of date. It is thus critical for the long-term mineral supply of the nation, for informed land-use planning decisions, and for environmental concerns that we increase our understanding of the geochemical variability of this region.

Geochemical data from a variety of sources exists for much of southern California and in 1992 these data were compiled, evaluated, and an eight element (Pb, Zn, Cu, Au, Ag, As, Sb, and Mo) geochemical anomaly map was produced for the area south of latitude 37°N (Folger et al, 1994). This work showed that there were several large areas, mostly national monuments and military reservations, that had not been sampled previously. The areas lacking geochemical data are so numerous and so large in southern California desert lands (Figure 1) that mineral belts and geochemical trends in this region could be overlooked using existing data. To adequately assess the geochemical variation of southern California it is necessary to obtain data in the poorly characterized areas. As part of this effort a geochemical survey of Death Valley National Monument, excluding the part in Nevada, was conducted in September of 1992. The major features of Death Valley are shown on a shaded relief map (Figure 2) from Chalfant (1936). The Monument covers a large part of the Death Valley 1°x2° quadrangle and part of the Goldfield quadrangle to the north and Trona quadrangle to the south.

Descriptions of the geology and mineral resources of Death Valley are in Albers (1981), Hunt (1975), Hunt and Mabey (1966), Streitz and Stinson (1974). The rocks in the Monument range from Precambrian to Tertiary in age and contain a wide variety of metallic minerals and nonmetallic industrial minerals. Metals that have been of most economic significance, in approximate order of value, are lead, gold, silver, tungsten, zinc, antimony, and iron. Important

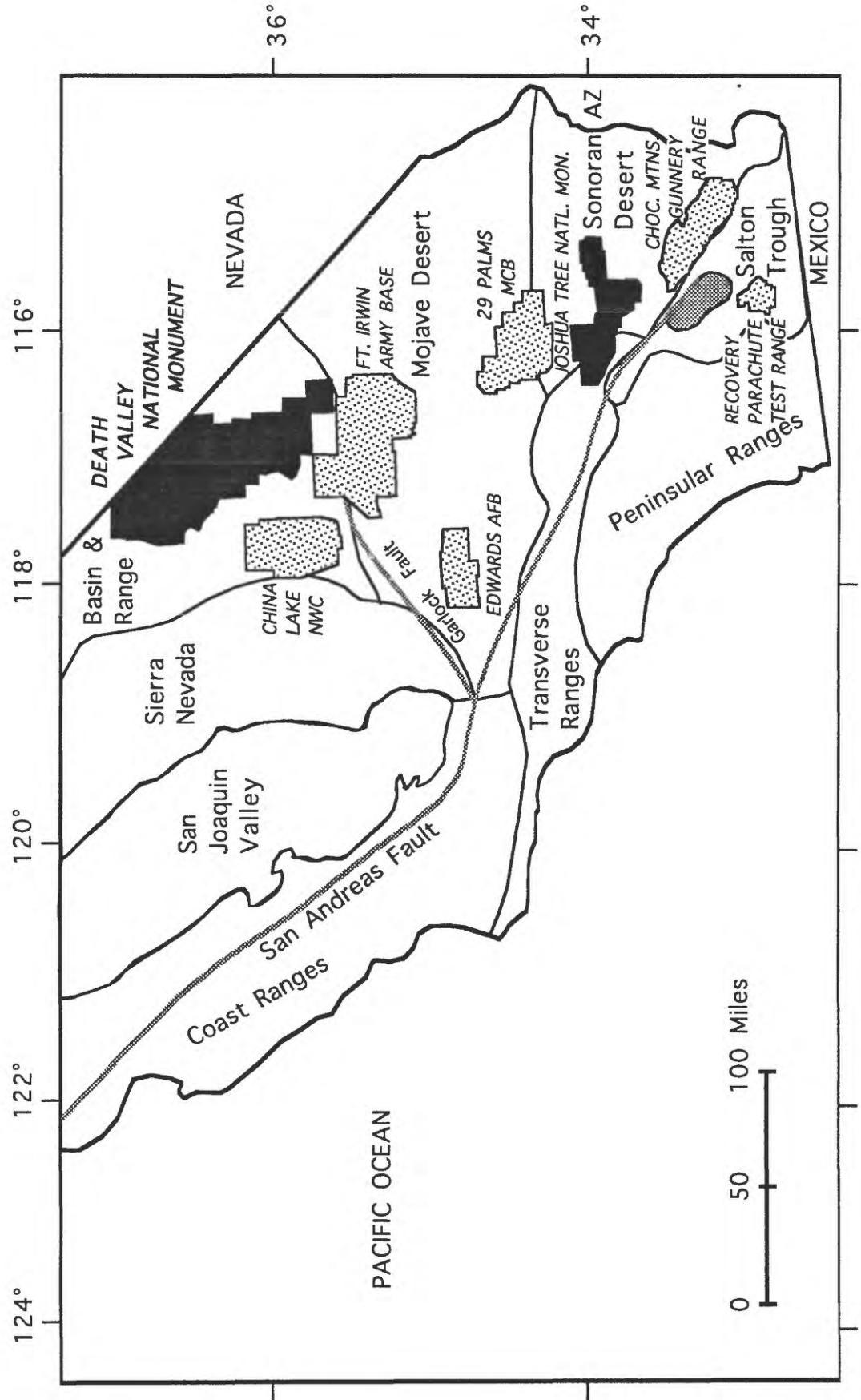
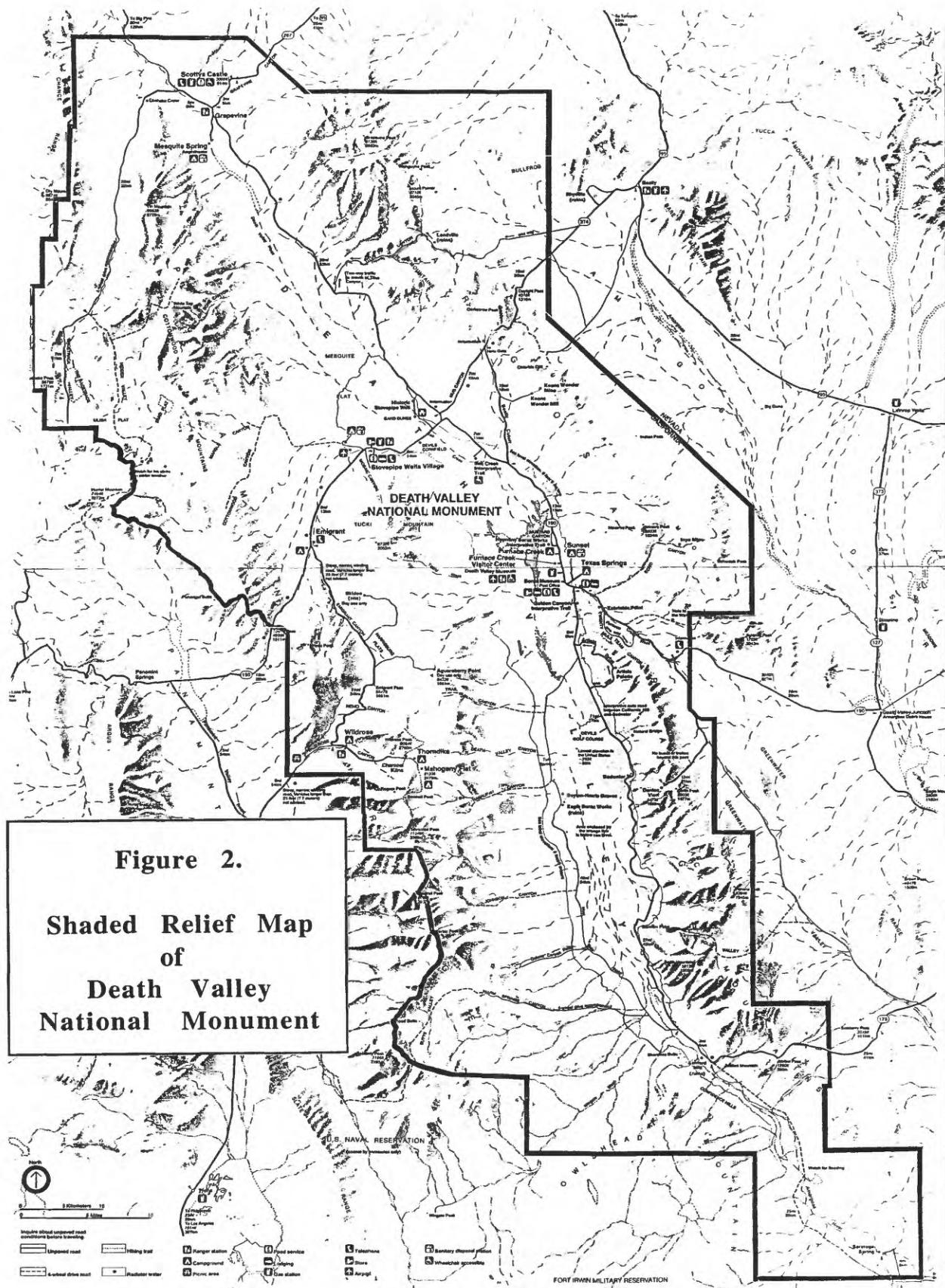


FIGURE 1. Map showing the location of Death Valley National Monument, Joshua Tree National Monument, and military reservations in southern California



industrial minerals include borate minerals, saline minerals, talc, volcanic rocks, and carbonate rocks.

The purpose of this interim report is to present analytical results for the new data and to provide a preliminary interpretation of this data. The geochemical data will eventually be combined with existing data from surrounding areas to produce a complete and up-to-date geochemical map of southern California.

Sample Collection and Preparation

The existing regional data base covering southern California consists of analyses of the minus-80 mesh or minus-100 mesh fraction of stream-sediment or soil samples collected by the USGS or by Department of Energy during the National Uranium Resource Evaluation (NURE) program over the past 20 years. Samples collected during the NURE program are being re-analyzed by methods identical to those described here. Sample density for the NURE program averaged about 1 sample per 5-10 mi². To maintain consistent coverage, stream-sediment samples were collected at a similar sample density in Death Valley National Monument. Stream-sediment samples were collected from 175 sites and the minus-80 mesh fraction analyzed by induction coupled plasma atomic emission spectroscopy (ICP-AES) and by graphite furnace atomic absorption spectrophotometry (AA). The stream-sediment samples consist of active alluvium collected from stream channels within mountain ranges and from alluvial fans along range fronts. Basin fill was not sampled. Average sample density in the mountain ranges is about one sample site per 5 mi². The area of the drainage basins sampled ranges from about 1 mi² to 20 mi². In areas where access was difficult fewer samples were collected from larger drainage basins. During the time frame of this study (10 days), it was impossible to obtain samples in a few places where access was extremely difficult. Even with this limitation, samples were obtained from more than 90% of the California part of the Monument. Plate 1 shows the sample number (sans the "DV" prefix) and location of each stream sediment sample site. The sample site map is designed to overlay the 1:250,000 scale U.S. Geological Survey topographic map of Death Valley National Monument and Vicinity, California; Nevada. Also provided is a page-size sample-site map of the same area (Figure 3). The sample-site numbers on Plate 1 and Figure 3 correspond to the sample numbers in Appendix 1.

Chemical analyses of stream-sediment samples yield information on the composition of the rock material eroded from the

EGGD

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Stream Sediment Sample Sites

FIGURE 3.



+

35°30'N
+ 116°15'W

drainage basin upstream from each sample site. Such information is useful in identifying those basins which contain concentrations of elements that may be related to mineral deposits. By evaluating the map distribution of drainage basins with high concentrations of certain elements it is possible to identify large tracts with above average mineral potential.

Analytical Methods

Two different ICP-AES methods were used to analyze each sample and gold was analyzed by AA. Table 1 lists the detection limits for each element for each method. The first ICP method, described by Briggs (1990), is used to determine the concentration of the following 40 elements Al, Ca, Fe, K, Mg, Na, P, Ti, Mn, Ag, As, Au, Ba, Be, Bi, Cd, Ce, Co, Cr, Cu, Eu, Ga, Ho, La, Li, Mo, Nb, Nd, Ni, Pb, Sc, Sn, Sr, Ta, Th, U, V, Y, Yb, and Zn after a four acid (HCl, HNO₃, HClO₄, HF) total digestion of the sample. It is extremely sensitive for many of these elements (see Table 1) but has poor detection limits for Au and some important pathfinder elements. The second ICP method, described by Motoooka (1990), is used to determine Ag, As, Au, Bi, Cd, Cu, Mo Pb, Sb, and Zn after partial dissolution of the sample by hydrochloric acid and hydrogen peroxide. This method is extremely sensitive for most of the 10 pathfinder elements (Table 1) with the exception of Au, which has a detection limit of 100 ppb. Gold was determined by graphite furnace atomic absorption spectrophotometry using the method of O'Leary and Meier (1990) which has a detection limit of 2 ppb.

Description of the Data Tables

The data tables in Appendix 1 begin with the identification number (FIELD_ID) used for each sample indicated on the proportional symbol maps. This is followed by the laboratory identification number (LAB_ID). The identification numbers are followed by the latitude and longitude in degrees, minutes, seconds units(LAT_DMS, LON_DMS) and in decimal degrees (LATITUDE, LONGITUDE). Columns in which the element headings show the letter "S" after the element symbol are total digestion ICP-AES analyses; "P" indicates partial digestion ICP-AES; and "AA" indicates atomic absorption analyses. An "L" in the tables indicates that a given element was looked for but not detected at the lower limit of determination shown for that element. If an element was observed but was greater than the upper reporting value, a "G" was entered in the table following the upper limit of determination. Because of the formatting used in the computer program that produced tables, some

TABLE 1. Detection limits for chemical analyses of stream sediments (from Arbogast, ed., 1990).

Elements	Lower determination limit	Upper determination limit
ICP-AES total digestion, method of Briggs (1990).		
Percent		
Aluminum (Al)	0.005	50
Calcium (Ca)	0.005	50
Iron (Fe)	0.02	25
Potassium (K)	0.01	50
Magnesium (Mg)	0.005	5
Sodium (Na)	0.006	50
Phosphorus (P)	0.005	50
Titanium (Ti)	0.005	25
Parts per million		
Silver (Ag)	2	10000
Arsenic (As)	10	50000
Gold (Au)	8	50000
Barium (Ba)	1	35000
Beryllium (Be)	1	5000
Bismuth (Bi)	10	50000
Cadmium (Cd)	2	25000
Cerium (Ce)	5	50000
Cobalt (Co)	2	25000
Chromium (Cr)	2	50000
Copper (Cu)	2	15000
Europium (Eu)	2	5000
Gallium (Ga)	4	50000
Holmium (Ho)	4	5000
Lanthanum (La)	2	50000
Lithium (Li)	2	50000
Manganese (Mn)	4	50000
Molybdenum (Mo)	2	50000
Niobium (Nb)	4	50000
Niodymium (Nd)	9	50000
Nickel (Ni)	3	50000
Lead (Pb)	4	50000
Scandium (Sc)	2	50000
Tin (Sn)	5	50000
Strontium (Sr)	2	15000
Tantalum (Ta)	40	50000
Thorium (Th)	6	50000
Uranium (U)	100	100000
Vanadium (V)	2	30000
Yttrium (Y)	2	25000
Ytterbium (Yb)	1	5000
Zinc (Zn)	2	15000

Table 1. Continued.

Elements	Lower determination limit	Upper determination limit
ICP-AES partial digestion, method of Motoooka, 1990.		
Parts per million		
Silver (Ag)	0.067	450
Arsenic (As)	0.67	6000
Gold (Au)	0.15	1500
Bismuth (Bi)	0.67	6000
Cadmium (Cd)	0.05	500
Copper (Cu)	0.05	500
Molybdenum (Mo)	0.09	900
Lead (Pb)	0.67	6000
Antimony (Sb)	0.67	6000
Zinc (Zn)	0.05	500
AA, Flame and Graphite Furnace Atomic Absorption, method of O'Leary and Meier (1990)		
Parts per million		
Gold (Au)	0.002	2.000

of the elements listed carry one or more non significant zeros to the right of the significant digits. The analysts did not determine these elements to the accuracy suggested by the extra zeros.

Basic Statistics and Single Element Geochemical Maps

Basic statistics for each element were calculated using the computer program Statview II (Abacus Concepts, 1987) and are presented in Appendix 2. For each element the following parameters were calculated: mean, standard deviation, standard error, variance, coefficient of variation, count, minimum, maximum, range, sum, sum of squares, number missing, values at the 10th, 25th, 50th, 75th, and 90th percentiles, number of values >90th percentile, number of values < 10th percentile, mode, geometric mean, kurtosis and skewness.

Linear Proportional Symbol Maps were constructed using the computer program MacGRIDZO (RockWare, 1990) for selected elements (Ag, Al, As, Au, Ba, Be, Bi, Ca, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Th, Ti, V, and Zn) and are presented in Appendix 3. The maps are page size and cover the same area as portrayed on the 1:250,000 scale sample-site map (Plate 1). On these maps the size of the symbols vary linearly as a function of the element concentration between the minimum and maximum symbol size declared by the user. For this report the minimum symbol size is about 0.5 mm and the maximum symbol size is about 5 mm. The symbol size for each value between the minimum and maximum were scaled according to the following equation:

$$\text{symbol size} = ((Z_{\text{value}} - Z_{\text{min}}) / Z_{\text{range}}) * \text{SIZE}_{\text{range}} + \text{MIN}_{\text{size}}$$

where Z_{value} is the element concentration, Z_{min} is the minimum element concentration, Z_{range} is the element concentration range, $\text{SIZE}_{\text{range}}$ is the symbol size range declared by the user, and MIN_{size} is the minimum symbol size declared by the user. The method of analysis for each element is also indicated as follows: "ICP" refers to total digestion ICP-AES, "PICP" refers to partial digestion ICP-AES, and "AA" refers to graphite furnace AA.

The geochemical data portrayed on the proportional symbol maps show that there are several areas within the Monument that contain elevated concentrations of elements typically associated with metallic mineralization. Most of these areas are in places where mineralization was recognized and prospected by miners earlier in the century, although, in a few places, evidence of mineralization was detected where previous evidence of mining or prospecting is absent.

For example, sample DV54 (Plate 1) is from a drainage that contains the Keane Wonder mine (Figure 2) and has elevated concentrations of Au, Ag, As, Pb, and Bi. Sample DV75 (Plate 1) also contains elevated, but lower, concentrations of the same suite of elements, but occurs in an area without previous mining. Mineralization similar to the Keane Wonder mine could be present in this area.

Much of the mineralization in the Monument occurs in the vicinity of felsic intrusive rocks and is probably related to hydrothermal activity associated with these intrusives. For example, samples DV64-72 (Plate 1), contain elevated concentrations of Cd, Cu, Fe, Mn, Mo, P, V, and Zn, and drain an area on the eastern margin of a large granitic intrusive that exhibits skarn minerals and marble in the contact metamorphic aureole. Another example is provided by samples DV120, DV121, and DV122 (Plate 1) that drain an area composed of Tertiary granite and rhyolite intrusives and have elevated concentrations of As, Ba, Mn, and Sb, that are possibly indicative of epithermal mineralization. Several more areas containing elevated concentrations of metals are indicated by the single element plots (Appendix 4).

The southwest part of the Monument, in the vicinity of Warm Spring Canyon and Anvil Spring Canyon (see topographic map of Death Valley), contains several old mining areas but was inaccessible. More sampling in this area would help to identify elements associated with mineralization.

Interelement Correlations and Factor Analysis

For the purposes of calculating correlation coefficients and factor analysis, samples with element concentrations below the detection limit for a given element were replaced with a value about one half the lower determination limit. Only elements with five or more valid analyses at or above the detection limit were included. Interelement correlation coefficients were calculated using Statview II (Abacus Concepts, 1987) are presented in Appendix 3.

R-mode factor analysis was performed on the data set using Statview II (Abacus Concepts, 1987), to further identify underlying element associations in the data, especially elements associated with mineralization. For the purposes of factor analysis, where an element was analyzed by two methods, the analytical results from the most sensitive method were used (PICP or AA). Factor analysis shows that most of the variation in the data can be accounted for by a nine factor model. Factor loadings for each element in each factor are shown on Table 2. The proportion of the common variance accounted for by each factor is also shown. Each factor appears to

Table 2. Element associations determined by factor model.

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Nd .988	Co .922	K .886	Au .956	Zn .851	Li .876	Be .883	Sr .703	Sb .739	
Th .935	Cr .915	Ca-.853	Ag .934	Cd .794	As .721	Bi .660	Na .413	Ba .607	
Ce .934	Ni .898	Al .798	Pb .827	Mo .708	Mo .514		V .329	Mn .436	
La .916	Sc .880	Mg -.758	Bi .417	Cu .546			P .303	As .291	
Nb .792	Fe .598	Ga .634	As .376	Pb .393			Ti .294		
Y .788	Ti .551	Ba .546					Yb .294		
Yb .679	V .551	Na .507							
P .584	Cu .478	Mn .318							
Fe .582	Ga .377	Be .262							
V .526	P .320	Cd -.255							
Mn .457	Al .306	P -.247							
Ti .414	Mn .245	V -.233							
Ga .271									
Proportionate Variance Contribution									
0.242	0.181	0.154	0.103	0.093	0.064	0.056	0.055	0.052	

represent an aspect of the physical makeup of the sediments and rocks in the field area. Factors 2, 3, and 8 contain element associations that are probably attributable to terrains composed of different rock types. Factor 2 with high loadings for Co, Cr, and Ni is from areas containing shaley lithologies. Factor 3 with high loadings for K and Al and high negative loadings for Ca and Mg distinguishes between areas dominated by felsic igneous or metamorphic rocks and carbonate rocks. Factor 8 with high loadings for Sr and Na is from areas adjacent to playas. Factor 7, with high loadings for Be and Bi, is likely indicative of a problem with the model related to the fact that only five Bi analyses were above detection limits. On another run that excluded Bi from the data set, the factor consists of Be without any other associated elements. Elevated Be concentrations may be indicative of pegmatites or rhyolites. Factors 1, 4, 5, 6, and 9 contain element associations that are suggestive of base- and/or precious-metal mineralization that are most likely associated with intrusive centers. Factor 1 with high loadings for a variety of rare earth elements, Th, Fe, P, and V may be indicative of Fe-skarn mineralization or felsic intrusives. Factor 4, with high loadings for Au, Ag, Pb, Bi, and As, is probably indicative of epithermal vein mineralization such as that at the Keane Wonder mine, near sample DV54 (plate 1), which had the highest score for this factor. Factor 5, with high loadings for Zn, Cd, Mo, Cu, and Pb, is probably indicative of vein, skarn, or porphyry mineralization. Factor 6, with high loadings for Li, As, and Mo may reflect the combination of epithermal mineralization in the vicinity of Pliocene lacustrine sediments that contain high levels of Li. Factor 9, with high loadings for Sb, Ba, Mn, and As, may be indicative of precious-metal epithermal mineralization. Samples collected from drainages with high loadings for these factors have an increased probability of containing base- or precious-metal mineralization that may, or may not, be of economic value. Proportional symbol plots for each factor are provided in Appendix 5.

Conclusions

Several areas within Death Valley National Monument contain elevated concentrations of elements commonly associated with base- and precious-metal mineralization. Most of these areas were identified and prospected by miners prior to legislation that created the Monument in 1933. A few sites contain elevated concentrations of metallic elements in areas where mining never took place. In the southwestern part of the study area, sample coverage is lacking due to difficult access and more sampling in this area would be beneficial.

Given the low relief and thick alluvial cover over much of the area it is possible that mineralized areas are present that were not detected by the methods used. This survey has increased our understanding of the types of mineralization and associated suites of elements present in Death Valley National Monument. When combined with data from surrounding regions, this information will improve our ability to assess the mineral resource potential of southern California.

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APPENDIX 1

FIELD_ID	LAB_ID	LAT_DMS	LON_DMS	LATITUDE	LONGITUDE	AL_%_S	CA_%_S	FE_%_S
DV001	D-521082	370502	1173217	37.0839	117.5381	6.2000	6.6000	2.4000
DV002	D-521083	370443	1173225	37.0786	117.5403	6.5000	5.9000	2.9000
DV003	D-521084	370510	1173125	37.0861	117.5236	6.7000	5.0000	4.1000
DV004	D-521085	370441	1172725	37.0781	117.4569	5.4000	9.8000	3.2000
DV005	D-521086	370353	1172616	37.0647	117.4378	6.0000	8.2000	3.1000
DV006	D-521087	370229	1172445	37.0414	117.4125	4.2000	13.0000	2.0000
DV007	D-521088	370103	1172555	37.0175	117.4319	6.7000	4.2000	4.4000
DV008	D-521089	370107	1172644	37.0186	117.4456	6.7000	5.5000	3.6000
DV009	D-521090	370035	1172653	37.0097	117.4481	6.8000	5.2000	2.9000
DV010	D-521091	365953	1172751	36.9981	117.4642	6.8000	5.5000	4.1000
DV011	D-521092	365853	1172751	36.9814	117.4642	6.2000	7.1000	4.2000
DV012	D-521093	365806	1172809	36.9683	117.4692	5.9000	6.4000	3.8000
DV013	D-521094	365625	1172903	36.9403	117.4842	5.8000	7.6000	2.7000
DV014	D-521095	365410	1172932	36.9028	117.4922	5.0000	8.8000	2.2000
DV015	D-521096	365238	1172941	36.8772	117.4947	5.3000	10.0000	2.3000
DV016	D-521097	365133	1172958	36.8592	117.4994	4.0000	16.0000	1.7000
DV017	D-521098	370203	1172912	37.0342	117.4867	6.0000	6.3000	3.5000
DV018	D-521099	370105	1172902	37.0181	117.4839	5.1000	8.9000	2.3000
DV019	D-521100	365720	1172935	36.9556	117.4931	5.2000	9.0000	2.2000
DV020	D-521101	365420	1172958	36.9056	117.4994	5.0000	11.0000	2.2000
DV021	D-521102	365105	1172951	36.8514	117.4975	5.8000	11.0000	2.2000
DV022	D-521103	364728	1173056	36.7911	117.5156	6.9000	5.9000	3.0000
DV023	D-521104	364553	1173210	36.7647	117.5361	5.7000	7.0000	2.5000
DV024	D-521105	364423	1173000	36.7397	117.5000	7.5000	5.9000	3.2000
DV025	D-521106	364424	1172839	36.7400	117.4775	6.5000	8.6000	2.7000
DV026	D-521107	364337	1173011	36.7269	117.5031	5.5000	13.0000	3.0000
DV027	D-521108	364234	1172918	36.7094	117.4883	6.0000	7.8000	2.6000
DV028	D-521109	364444	1173431	36.7456	117.5753	6.6000	7.0000	3.7000
DV029	D-521110	363920	1173353	36.6556	117.5647	4.0000	19.0000	2.1000
DV030	D-521111	363755	1173418	36.6319	117.5717	6.1000	8.8000	3.6000
DV031	D-521112	364113	1173309	36.6869	117.5525	7.3000	4.6000	4.2000
DV032	D-521113	364205	1173307	36.7014	117.5519	6.1000	10.0000	4.4000
DV033	D-521114	370304	1171718	37.0511	117.2883	7.3000	3.4000	3.8000
DV034	D-521115	370240	1171806	37.0444	117.3017	7.1000	3.3000	3.9000
DV035	D-521116	370153	1171854	37.0314	117.3150	7.1000	3.5000	3.7000
DV036	D-521117	370213	1172042	37.0369	117.3450	7.1000	4.9000	3.6000
DV037	D-521118	370044	1172329	37.0122	117.3914	6.3000	7.5000	4.0000
DV038	D-521119	370114	1172349	37.0206	117.3969	5.3000	11.0000	3.0000
DV039	D-521120	365932	1172127	36.9922	117.3575	6.7000	4.2000	2.7000
DV040	D-521121	365724	1172006	36.9567	117.3350	6.8000	4.6000	3.1000
DV041	D-521122	365606	1171841	36.9350	117.3114	5.7000	6.5000	3.4000
DV042	D-521123	365429	1171657	36.9081	117.2825	5.1000	8.9000	1.8000
DV043	D-521124	365258	1171614	36.8828	117.2706	4.4000	11.0000	2.0000
DV044	D-521125	365113	1171404	36.8536	117.2344	5.2000	11.0000	2.0000
DV045	D-521126	365017	1171303	36.8381	117.2175	4.2000	12.0000	1.8000
DV046	D-521127	364924	1171026	36.8233	117.1739	5.6000	8.2000	1.8000
DV047	D-521128	364535	1170739	36.7597	117.1275	5.3000	8.7000	1.9000
DV048	D-521129	364331	1170708	36.7253	117.1189	5.5000	6.9000	2.4000
DV049	D-521130	363921	1170301	36.6558	117.0503	5.6000	6.0000	2.8000
DV050	D-521131	364351	1165825	36.7308	116.9736	6.0000	2.4000	3.6000
DV051	D-521132	364457	1165707	36.7492	116.9519	6.1000	3.1000	3.5000
DV052	D-521133	364508	1165600	36.7522	116.9333	6.1000	5.5000	3.2000
DV053	D-521134	364805	1165508	36.8014	116.9189	5.8000	6.8000	2.7000
DV054	D-521135	364003	1165432	36.6675	116.9089	6.7000	3.8000	4.6000
DV055	D-521136	364154	1165713	36.6983	116.9536	6.4000	4.7000	3.4000
DV056	D-521137	364930	1165840	36.8250	116.9778	6.6000	3.0000	2.5000
DV057	D-521138	364939	1170104	36.8275	117.0178	6.5000	4.6000	2.3000
DV058	D-521139	365109	1170335	36.8525	117.0597	5.8000	7.2000	2.8000
DV059	D-521140	365116	1170347	36.8544	117.0631	5.7000	6.1000	2.4000

APPENDIX 1

FIELD_ID	LAB_ID	LAT_DMS	LON_DMS	LATITUDE	LONGITUDE	AL_%_S	CA_%_S	FE_%_S
DV060	D-521141	364939	1170613	36.8275	117.1036	5.0000	11.0000	2.5000
DV061	D-521142	363611	1170504	36.6031	117.0844	6.0000	7.9000	2.9000
DV062	D-521143	363607	1170611	36.6019	117.1031	5.9000	7.8000	5.6000
DV063	D-521144	363536	1170845	36.5933	117.1458	6.7000	6.0000	3.5000
DV064	D-521145	363832	1171728	36.6422	117.2911	5.9000	9.4000	3.6000
DV065	D-521146	363626	1171752	36.6072	117.2978	6.5000	7.1000	5.4000
DV066	D-521147	363419	1171905	36.5719	117.3181	7.5000	6.3000	4.5000
DV067	D-521148	363344	1171947	36.5622	117.3297	7.2000	6.7000	5.5000
DV068	D-521149	363323	1172007	36.5564	117.3353	6.6000	8.2000	5.5000
DV069	D-521150	363253	1172015	36.5481	117.3375	4.9000	8.3000	15.0000
DV070	D-521151	363746	1171832	36.6294	117.3089	4.9000	9.8000	3.1000
DV071	D-521152	363643	1171959	36.6119	117.3331	4.9000	9.9000	2.3000
DV072	D-521153	363632	1172022	36.6089	117.3394	6.5000	8.0000	5.7000
DV073	D-521154	363304	1171204	36.5511	117.2011	7.2000	5.2000	4.2000
DV074	D-521155	363113	1171443	36.5203	117.2453	4.3000	14.0000	2.7000
DV075	D-521156	363017	1171236	36.5047	117.2100	6.3000	5.0000	3.6000
DV076	D-521157	363004	1171442	36.5011	117.2450	6.4000	7.1000	4.1000
DV077	D-521158	362749	1171352	36.4636	117.2311	7.5000	5.1000	3.9000
DV078	D-521159	362739	1171411	36.4608	117.2364	5.6000	7.9000	3.6000
DV079	D-521160	362133	1171715	36.3592	117.2875	5.4000	3.1000	3.2000
DV080	D-521161	362448	1171040	36.4133	117.1778	6.6000	6.8000	4.0000
DV081	D-521162	362458	1171028	36.4161	117.1744	8.0000	4.3000	3.9000
DV082	D-521163	362328	1170811	36.3911	117.1364	7.2000	3.5000	3.6000
DV083	D-521164	362205	1170551	36.3681	117.0975	8.3000	3.1000	4.0000
DV084	D-521165	362013	1170754	36.3369	117.1317	6.6000	5.0000	3.9000
DV085	D-521166	361834	1170844	36.3094	117.1456	6.7000	4.6000	4.6000
DV086	D-521167	361736	1171024	36.2933	117.1733	6.8000	4.9000	4.3000
DV087	D-521168	361831	1171131	36.3086	117.1919	6.8000	4.3000	4.0000
DV088	D-521169	361456	1170800	36.2489	117.1333	7.4000	3.0000	5.0000
DV089	D-521170	361515	1170634	36.2542	117.1094	6.2000	7.0000	4.3000
DV090	D-521171	361528	1170634	36.2578	117.1094	6.7000	7.0000	4.2000
DV091	D-521172	361510	1171333	36.2528	117.2258	6.2000	5.1000	5.4000
DV092	D-521173	365745	1172222	36.9625	117.3728	5.4000	7.8000	6.3000
DV093	D-521174	364142	1170055	36.6950	117.0153	6.0000	4.6000	2.9000
DV094	D-521175	363133	1165240	36.5258	116.8778	5.5000	3.6000	3.0000
DV095	D-521176	363402	1165327	36.5672	116.8908	5.8000	4.4000	4.0000
DV096	D-521177	363418	1165356	36.5717	116.8989	5.5000	2.2000	3.5000
DV097	D-521178	363037	1165106	36.5103	116.8517	5.0000	5.9000	2.1000
DV098	D-521179	362737	1165140	36.4603	116.8611	5.0000	5.9000	2.3000
DV099	D-521180	361442	1164056	36.2450	116.6822	7.9000	2.5000	3.3000
DV100	D-521181	361353	1163812	36.2314	116.6367	7.7000	2.9000	4.9000
DV101	D-521182	361729	1164042	36.2914	116.6783	7.7000	3.4000	4.1000
DV102	D-521183	362007	1164120	36.3353	116.6889	7.2000	7.5000	4.5000
DV103	D-521184	362346	1164531	36.3961	116.7586	4.0000	12.0000	1.8000
DV104	D-521185	362339	1164554	36.3942	116.7650	6.3000	9.5000	4.2000
DV105	D-521186	362422	1164641	36.4061	116.7781	5.1000	9.9000	1.9000
DV106	D-521187	362427	1164734	36.4075	116.7928	6.7000	11.0000	3.4000
DV107	D-521188	362600	1164847	36.4333	116.8131	4.5000	9.3000	2.0000
DV108	D-521189	362950	1164333	36.4972	116.7258	6.2000	3.8000	3.0000
DV109	D-521190	363010	1164300	36.5028	116.7167	7.0000	2.0000	3.8000
DV110	D-521191	363020	1164312	36.5056	116.7200	6.7000	1.5000	4.4000
DV111	D-521192	362959	1164400	36.4997	116.7333	6.7000	2.7000	3.3000
DV112	D-521193	362937	1164402	36.4936	116.7339	5.8000	5.1000	2.9000
DV113	D-521194	362358	1165035	36.3994	116.8431	6.6000	9.2000	3.0000
DV114	D-521195	362222	1165042	36.3728	116.8450	6.9000	6.7000	3.7000
DV115	D-521196	361958	1164942	36.3328	116.8283	7.4000	5.6000	3.0000
DV116	D-521197	361800	1164832	36.3000	116.8089	7.3000	5.3000	3.5000
DV117	D-521198	361637	1164739	36.2769	116.7942	7.5000	3.5000	3.8000
DV118	D-521199	361542	1164634	36.2617	116.7761	7.2000	4.2000	2.9000

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FIELD_ID	LAB_ID	LAT_DMS	LON_DMS	LATITUDE	LONGITUDE	AL_%_S	CA_%_S	FE_%_S
DV119	D-521200	361322	1164629	36.2228	116.7747	7.4000	3.8000	4.3000
DV120	D-521201	361135	1164608	36.1931	116.7689	7.4000	2.2000	3.8000
DV121	D-521202	361011	1164555	36.1697	116.7653	7.6000	2.3000	2.9000
DV122	D-521203	360913	1164618	36.1536	116.7717	7.5000	2.7000	3.6000
DV123	D-521204	360707	1164548	36.1186	116.7633	7.8000	4.0000	4.4000
DV124	D-521205	360546	1164350	36.0961	116.7306	8.0000	5.4000	8.8000
DV125	D-521206	360507	1164413	36.0853	116.7369	7.6000	3.8000	6.4000
DV126	D-521207	360416	1164432	36.0711	116.7422	7.6000	4.2000	6.6000
DV127	D-521208	360346	1164521	36.0628	116.7558	7.1000	4.3000	4.8000
DV128	D-521209	360025	1164434	36.0069	116.7428	6.3000	9.0000	3.4000
DV129	D-521210	355914	1164358	35.9872	116.7328	7.7000	2.7000	4.2000
DV130	D-521211	355808	1164326	35.9689	116.7239	7.6000	2.9000	3.7000
DV131	D-521212	355610	1164155	35.9361	116.6986	7.5000	3.1000	3.5000
DV132	D-521213	355451	1164125	35.9142	116.6903	7.3000	3.8000	4.2000
DV133	D-521214	361917	1165333	36.3214	116.8925	5.5000	8.1000	3.5000
DV134	D-521215	361542	1165338	36.2617	116.8939	5.3000	5.6000	3.0000
DV135	D-521216	361327	1165305	36.2242	116.8847	5.2000	3.5000	3.3000
DV136	D-521217	361025	1165331	36.1736	116.8919	5.5000	2.1000	2.9000
DV137	D-521218	360935	1165200	36.1597	116.8667	6.1000	2.4000	4.1000
DV138	D-521219	360754	1165119	36.1317	116.8553	6.4000	2.3000	3.0000
DV139	D-521220	360549	1165054	36.0969	116.8483	6.1000	3.8000	2.9000
DV140	D-521221	360403	1165034	36.0675	116.8428	5.3000	3.5000	3.1000
DV141	D-521222	360148	1165155	36.0300	116.8653	6.1000	5.9000	4.0000
DV142	D-521223	355737	1164855	35.9603	116.8153	8.5000	3.6000	3.7000
DV143	D-521224	355744	1165258	35.9622	116.8828	6.9000	6.6000	3.6000
DV144	D-521225	355706	1164524	35.9517	116.7567	8.5000	4.3000	4.1000
DV145	D-521226	355508	1164037	35.9189	116.6769	7.4000	3.7000	3.4000
DV146	D-521227	355410	1163928	35.9028	116.6578	6.8000	3.5000	3.9000
DV147	D-521228	355309	1163936	35.8858	116.6600	7.8000	4.7000	3.0000
DV148	D-521229	355439	1163533	35.9108	116.5925	7.1000	3.2000	5.1000
DV149	D-521230	355557	1163423	35.9325	116.5731	7.0000	4.1000	4.2000
DV150	D-521231	355431	1163411	35.9086	116.5697	7.1000	4.4000	4.2000
DV151	D-521232	355403	1163331	35.9008	116.5586	6.9000	3.2000	6.2000
DV152	D-521233	355520	1163249	35.9222	116.5469	6.8000	4.0000	3.1000
DV153	D-521234	355522	1163144	35.9228	116.5289	7.4000	3.1000	3.0000
DV154	D-521235	355244	1163654	35.8789	116.6150	6.9000	2.9000	3.1000
DV155	D-521236	355056	1163405	35.8489	116.5681	6.6000	2.6000	3.1000
DV156	D-521237	354946	1163232	35.8294	116.5422	6.8000	2.9000	2.4000
DV157	D-521238	354756	1163140	35.7989	116.5278	6.9000	3.3000	3.3000
DV158	D-521239	355409	1164049	35.9025	116.6803	7.3000	3.7000	5.1000
DV159	D-521240	355221	1163759	35.8725	116.6331	7.5000	4.2000	2.7000
DV160	D-521241	354450	1163242	35.7472	116.5450	7.0000	3.9000	4.9000
DV161	D-521242	354351	1163218	35.7308	116.5383	7.4000	3.5000	3.8000
DV162	D-521243	354243	1163139	35.7119	116.5275	7.5000	2.8000	2.6000
DV163	D-521244	354124	1163008	35.6900	116.5022	7.0000	3.2000	5.1000
DV164	D-521245	354058	1162823	35.6828	116.4731	6.9000	4.9000	3.8000
DV165	D-521246	354011	1162722	35.6697	116.4561	7.0000	4.5000	3.2000
DV166	D-521247	353937	1162624	35.6603	116.4400	7.1000	4.1000	3.1000
DV167	D-521248	354112	1162405	35.6867	116.4014	6.5000	3.3000	2.5000
DV168	D-521249	354051	1162441	35.6808	116.4114	6.6000	3.6000	2.7000
DV169	D-521250	354239	1162334	35.7108	116.3928	6.3000	4.8000	3.2000
DV170	D-521251	354320	1162326	35.7222	116.3906	6.8000	3.2000	3.1000
DV171	D-521252	354414	1162252	35.7372	116.3811	6.9000	2.8000	2.7000
DV172	D-521253	354610	1162431	35.7694	116.4086	6.7000	4.4000	2.9000
DV173	D-521254	354614	1162451	35.7706	116.4142	6.9000	3.3000	2.9000
DV174	D-521255	354714	1162335	35.7872	116.3931	7.0000	3.3000	2.6000
DV175	D-521256	354548	1162320	35.7633	116.3889	6.5000	3.1000	3.9000

APPENDIX 1

FIELD_ID	K_%_S	MG_%_S	NA_%_S	P_%_S	TI_%_S	MN_PPM_S	AG_PPM_S	AS_PPM_S
DV001	2.3000	2.9000	1.9000	0.0900	0.3100	580.0000	2.0000L	10.0000
DV002	2.2000	2.7000	1.9000	0.1100	0.3800	650.0000	2.0000L	10.0000L
DV003	2.2000	2.4000	1.8000	0.1300	0.4700	760.0000	2.0000L	10.0000
DV004	1.9000	3.9000	1.5000	0.1200	0.3200	660.0000	2.0000L	10.0000
DV005	2.1000	3.5000	1.6000	0.1400	0.3800	710.0000	2.0000L	10.0000
DV006	1.6000	5.0000	0.9200	0.1000	0.2000	530.0000	2.0000L	18.0000
DV007	2.4000	1.7000	2.0000	0.1300	0.4800	720.0000	2.0000L	10.0000L
DV008	2.5000	1.8000	1.8000	0.1200	0.4300	690.0000	2.0000L	12.0000
DV009	2.7000	1.8000	1.5000	0.0800	0.3300	540.0000	2.0000L	22.0000
DV010	2.6000	1.3000	2.0000	0.1200	0.4400	760.0000	2.0000L	12.0000
DV011	2.5000	1.4000	1.7000	0.1000	0.4100	790.0000	2.0000L	10.0000L
DV012	2.2000	2.3000	1.4000	0.1300	0.4100	680.0000	2.0000L	10.0000L
DV013	2.1000	3.4000	1.4000	0.1000	0.3200	580.0000	2.0000L	10.0000
DV014	1.7000	4.0000	1.1000	0.1100	0.2300	530.0000	2.0000L	11.0000
DV015	1.7000	4.0000	1.2000	0.0800	0.2600	550.0000	2.0000L	10.0000L
DV016	1.4000	4.0000	1.0000	0.0700	0.1900	420.0000	2.0000L	10.0000L
DV017	2.1000	2.9000	1.8000	0.1200	0.4200	650.0000	2.0000L	11.0000
DV018	1.8000	3.7000	1.4000	0.0800	0.2500	490.0000	2.0000L	15.0000
DV019	1.7000	3.8000	1.3000	0.0900	0.2600	530.0000	2.0000L	23.0000
DV020	1.6000	3.7000	1.4000	0.0800	0.2800	510.0000	2.0000L	14.0000
DV021	1.9000	2.8000	1.4000	0.1000	0.2700	550.0000	2.0000L	10.0000L
DV022	1.7000	1.6000	1.2000	0.1200	0.3000	530.0000	2.0000L	10.0000
DV023	1.7000	2.9000	1.2000	0.1000	0.2700	570.0000	2.0000L	13.0000
DV024	1.8000	1.8000	1.2000	0.1200	0.3000	500.0000	2.0000L	11.0000
DV025	1.9000	1.7000	1.4000	0.1100	0.3000	570.0000	2.0000L	11.0000
DV026	1.8000	1.9000	1.4000	0.0900	0.2900	580.0000	2.0000L	14.0000
DV027	1.9000	3.2000	1.7000	0.1200	0.3300	650.0000	2.0000L	10.0000L
DV028	2.1000	2.4000	1.8000	0.1100	0.4100	720.0000	2.0000L	14.0000
DV029	1.3000	2.4000	1.2000	0.0700	0.2100	460.0000	2.0000L	10.0000L
DV030	2.0000	3.6000	1.7000	0.1200	0.3800	750.0000	2.0000L	15.0000
DV031	2.1000	1.5000	2.4000	0.1500	0.4800	780.0000	2.0000L	10.0000L
DV032	1.8000	2.2000	1.7000	0.1400	0.3900	790.0000	2.0000L	10.0000L
DV033	2.6000	1.5000	2.1000	0.1400	0.6200	850.0000	2.0000L	10.0000L
DV034	2.6000	1.5000	2.0000	0.1200	0.5800	850.0000	2.0000L	10.0000L
DV035	2.5000	1.8000	1.9000	0.1100	0.4800	800.0000	2.0000L	12.0000
DV036	2.2000	2.1000	1.3000	0.1800	0.5500	720.0000	2.0000L	10.0000
DV037	2.1000	2.3000	1.6000	0.1400	0.5700	770.0000	2.0000L	10.0000L
DV038	1.9000	2.7000	1.5000	0.1300	0.4000	620.0000	2.0000L	11.0000
DV039	2.7000	1.8000	1.9000	0.0800	0.3400	630.0000	2.0000L	10.0000L
DV040	2.4000	1.9000	1.8000	0.1000	0.4600	710.0000	2.0000L	11.0000
DV041	2.3000	2.2000	1.3000	0.0800	0.4600	820.0000	2.0000L	13.0000
DV042	2.2000	3.8000	1.2000	0.0800	0.2100	480.0000	2.0000L	18.0000
DV043	2.0000	3.7000	0.7500	0.0500	0.1900	440.0000	2.0000L	19.0000
DV044	2.1000	2.9000	1.3000	0.0700	0.2800	490.0000	2.0000L	24.0000
DV045	1.8000	4.1000	0.9300	0.0900	0.2000	410.0000	2.0000L	28.0000
DV046	2.5000	2.9000	1.2000	0.0700	0.2000	490.0000	2.0000L	25.0000
DV047	2.2000	3.0000	1.7000	0.0900	0.2400	470.0000	2.0000L	13.0000
DV048	2.4000	2.1000	1.4000	0.0800	0.2500	520.0000	2.0000L	13.0000
DV049	2.3000	1.6000	1.7000	0.1100	0.3400	540.0000	2.0000L	10.0000L
DV050	2.9000	1.0000	0.7800	0.0800	0.3100	680.0000	2.0000L	14.0000
DV051	2.9000	1.4000	0.6700	0.0900	0.3500	740.0000	2.0000L	16.0000
DV052	2.4000	1.7000	1.1000	0.0800	0.3200	690.0000	2.0000L	10.0000L
DV053	2.3000	1.5000	1.2000	0.0700	0.3100	640.0000	2.0000L	22.0000
DV054	2.1000	1.2000	0.9800	0.0700	0.3900	640.0000	2.0000L	81.0000
DV055	2.6000	2.0000	0.9700	0.0800	0.3100	620.0000	2.0000L	11.0000
DV056	2.9000	1.1000	1.6000	0.0600	0.3200	720.0000	2.0000L	22.0000
DV057	2.6000	1.5000	1.1000	0.0800	0.2600	650.0000	2.0000L	25.0000
DV058	2.4000	1.8000	0.9100	0.0700	0.2700	570.0000	2.0000L	17.0000
DV059	2.6000	1.5000	0.9100	0.0700	0.2500	550.0000	2.0000L	18.0000

APPENDIX 1

FIELD_ID	K_%_S	MG_%_S	NA_%_S	P_%_S	TI_%_S	MN_PPM_S	AG_PPM_S	AS_PPM_S
DV060	2.2000	4.0000	0.8700	0.0700	0.2400	520.0000	2.0000L	17.0000
DV061	2.3000	3.1000	2.4000	0.1100	0.3000	590.0000	2.0000L	14.0000
DV062	2.0000	2.8000	1.8000	0.1700	0.4400	840.0000	2.0000L	11.0000
DV063	2.2000	2.6000	1.5000	0.1000	0.2400	540.0000	2.0000L	15.0000
DV064	2.0000	1.7000	1.3000	0.1500	0.3800	690.0000	2.0000L	16.0000
DV065	2.0000	2.3000	1.8000	0.1700	0.5000	920.0000	2.0000L	14.0000
DV066	2.3000	1.1000	1.5000	0.2400	0.5100	880.0000	2.0000L	16.0000
DV067	2.3000	2.2000	1.8000	0.4600	0.5500	1400.0000	2.0000L	15.0000
DV068	2.2000	2.3000	1.8000	0.2800	0.5500	1200.0000	2.0000L	10.0000
DV069	1.4000	1.9000	1.5000	0.4600	0.9700	1600.0000	2.0000L	10.0000L
DV070	1.7000	3.0000	1.3000	0.1100	0.3100	570.0000	2.0000L	12.0000
DV071	1.7000	2.7000	1.2000	0.0800	0.2200	480.0000	2.0000L	12.0000
DV072	2.0000	1.9000	1.8000	0.2000	0.5200	1000.0000	2.0000L	11.0000
DV073	2.6000	2.3000	1.1000	0.1100	0.2600	830.0000	2.0000L	50.0000
DV074	1.4000	5.0000G	1.1000	0.0900	0.2800	620.0000	2.0000L	14.0000
DV075	2.1000	1.9000	1.5000	0.1200	0.3100	830.0000	2.0000L	25.0000
DV076	1.9000	3.3000	1.7000	0.1300	0.4400	810.0000	2.0000L	13.0000
DV077	2.1000	2.5000	1.4000	0.1000	0.3900	760.0000	2.0000L	20.0000
DV078	1.6000	4.0000	0.9400	0.0900	0.3700	680.0000	2.0000L	10.0000L
DV079	2.2000	2.5000	0.6000	0.0600	0.2700	510.0000	2.0000L	10.0000L
DV080	2.0000	2.8000	0.7900	0.0800	0.3300	700.0000	2.0000L	45.0000
DV081	2.9000	1.9000	1.3000	0.1000	0.3400	770.0000	2.0000L	18.0000
DV082	2.5000	1.7000	1.6000	0.1100	0.3700	800.0000	2.0000L	22.0000
DV083	2.8000	1.8000	1.2000	0.1000	0.3200	930.0000	2.0000L	29.0000
DV084	2.7000	1.8000	1.1000	0.0900	0.3700	800.0000	2.0000L	42.0000
DV085	2.5000	1.9000	1.1000	0.1100	0.4500	820.0000	2.0000L	38.0000
DV086	2.6000	1.6000	1.1000	0.0900	0.4300	850.0000	2.0000L	45.0000
DV087	2.4000	2.2000	1.2000	0.1300	0.4700	940.0000	2.0000L	28.0000
DV088	2.7000	2.2000	0.9300	0.1000	0.5600	970.0000	2.0000L	11.0000
DV089	2.0000	4.2000	0.8000	0.0800	0.2800	740.0000	2.0000L	24.0000
DV090	2.6000	2.6000	0.7900	0.0900	0.3500	770.0000	2.0000L	81.0000
DV091	1.9000	2.7000	1.1000	0.1000	0.5100	1000.0000	2.0000L	55.0000
DV092	2.0000	2.4000	1.5000	0.0800	0.5700	950.0000	2.0000L	11.0000
DV093	2.7000	1.6000	1.2000	0.0800	0.3100	540.0000	2.0000L	10.0000L
DV094	2.5000	1.5000	1.2000	0.0600	0.2500	500.0000	2.0000L	14.0000
DV095	2.3000	1.3000	1.5000	0.0600	0.3000	660.0000	2.0000L	16.0000
DV096	2.0000	1.0000	0.9100	0.0400	0.2300	510.0000	2.0000L	10.0000L
DV097	2.5000	1.4000	1.2000	0.0500	0.2000	410.0000	2.0000L	15.0000
DV098	2.6000	1.9000	1.0000	0.0700	0.2300	500.0000	2.0000L	19.0000
DV099	2.8000	1.3000	2.0000	0.0800	0.4000	680.0000	2.0000L	10.0000
DV100	2.6000	1.3000	2.1000	0.0900	0.6300	1200.0000	2.0000L	10.0000L
DV101	2.7000	1.3000	2.1000	0.0800	0.4900	800.0000	2.0000L	10.0000
DV102	1.8000	2.2000	2.1000	0.1100	0.7000	1100.0000	2.0000L	39.0000
DV103	1.7000	3.9000	1.0000	0.0500	0.2000	450.0000	2.0000L	17.0000
DV104	2.0000	2.7000	1.9000	0.1100	0.5300	890.0000	2.0000L	62.0000
DV105	2.2000	3.0000	1.3000	0.0600	0.2000	490.0000	2.0000L	24.0000
DV106	2.4000	2.8000	2.1000	0.0900	0.3500	710.0000	2.0000L	67.0000
DV107	1.8000	3.8000	0.9700	0.0500	0.1900	490.0000	2.0000L	19.0000
DV108	2.6000	1.8000	1.1000	0.0600	0.2800	560.0000	2.0000L	12.0000
DV109	2.6000	0.9700	0.9000	0.0500	0.2100	630.0000	2.0000L	15.0000
DV110	2.4000	0.8400	0.6700	0.0500	0.1900	510.0000	2.0000L	10.0000L
DV111	2.8000	1.7000	1.2000	0.1000	0.3400	740.0000	2.0000L	18.0000
DV112	2.4000	1.6000	0.8200	0.0700	0.2300	610.0000	2.0000L	15.0000
DV113	3.0000	2.0000	1.6000	0.0900	0.3600	680.0000	2.0000L	42.0000
DV114	3.1000	2.3000	1.8000	0.1000	0.4800	820.0000	2.0000L	70.0000
DV115	3.2000	1.9000	2.0000	0.0900	0.4000	880.0000	2.0000L	41.0000
DV116	3.6000	2.3000	2.0000	0.0900	0.4300	1100.0000	2.0000L	47.0000
DV117	4.3000	1.1000	1.7000	0.0900	0.4600	1300.0000	2.0000L	22.0000
DV118	3.1000	1.8000	2.1000	0.1000	0.2800	810.0000	2.0000L	10.0000L

APPENDIX 1

FIELD_ID	K_%_S	MG_%_S	NA_%_S	P_%_S	TI_%_S	MN_PPM_S	AG_PPM_S	AS_PPM_S
DV119	2.6000	1.9000	3.4000	0.1200	0.3900	990.0000	2.0000L	12.0000
DV120	3.3000	0.9900	2.8000	0.0900	0.3200	1400.0000	2.0000L	16.0000
DV121	4.5000	0.8300	2.3000	0.0800	0.2700	1400.0000	2.0000L	36.0000
DV122	4.3000	1.0000	1.9000	0.0900	0.3700	1200.0000	2.0000L	50.0000
DV123	3.0000	1.6000	2.8000	0.1200	0.6500	1200.0000	2.0000L	21.0000
DV124	1.7000	3.0000	2.2000	0.3000	1.0000	1400.0000	2.0000L	10.0000L
DV125	2.5000	1.8000	2.8000	0.1400	0.7500	920.0000	2.0000L	10.0000L
DV126	2.3000	2.4000	2.4000	0.1400	0.8500	1100.0000	2.0000L	10.0000L
DV127	2.7000	2.2000	2.3000	0.1300	0.5200	970.0000	2.0000L	10.0000
DV128	2.2000	4.2000	1.8000	0.1400	0.3200	890.0000	2.0000L	10.0000
DV129	2.8000	1.3000	2.7000	0.1400	0.3400	530.0000	2.0000L	10.0000L
DV130	2.9000	0.9700	2.5000	0.1100	0.3400	680.0000	2.0000L	10.0000L
DV131	2.9000	1.0000	2.2000	0.1100	0.4400	870.0000	2.0000L	10.0000L
DV132	2.4000	1.4000	2.2000	0.1400	0.5700	1200.0000	2.0000L	10.0000L
DV133	2.3000	3.0000	0.7700	0.0600	0.1600	570.0000	2.0000L	29.0000
DV134	2.3000	2.3000	1.1000	0.0600	0.1900	480.0000	2.0000L	12.0000
DV135	2.2000	1.6000	1.0000	0.0600	0.2800	520.0000	2.0000L	10.0000L
DV136	2.4000	1.1000	0.8700	0.0700	0.2700	560.0000	2.0000L	12.0000
DV137	2.6000	1.3000	1.8000	0.0800	0.3800	870.0000	2.0000L	10.0000
DV138	2.9000	1.1000	2.0000	0.0800	0.3300	710.0000	2.0000L	10.0000L
DV139	2.2000	1.9000	1.4000	0.0700	0.2800	540.0000	2.0000L	12.0000
DV140	2.1000	1.7000	1.0000	0.0700	0.3200	520.0000	2.0000L	10.0000
DV141	2.4000	2.9000	1.3000	0.0800	0.6900	920.0000	2.0000L	13.0000
DV142	2.2000	1.7000	2.0000	0.1600	0.4700	750.0000	2.0000L	10.0000L
DV143	2.0000	1.9000	1.8000	0.1200	0.5400	740.0000	2.0000L	10.0000L
DV144	2.1000	1.6000	2.5000	0.1700	0.5800	930.0000	2.0000L	10.0000L
DV145	2.5000	1.5000	2.1000	0.1100	0.4400	800.0000	2.0000L	10.0000L
DV146	2.5000	1.3000	2.0000	0.1000	0.5000	870.0000	2.0000L	10.0000L
DV147	2.3000	1.0000	2.4000	0.1200	0.4100	1500.0000	2.0000L	13.0000
DV148	2.6000	1.3000	1.8000	0.1700	0.9500	1600.0000	2.0000L	15.0000
DV149	2.4000	2.1000	1.8000	0.0900	0.4900	960.0000	2.0000L	10.0000L
DV150	2.4000	1.5000	1.8000	0.1000	0.4900	920.0000	2.0000L	10.0000L
DV151	2.9000	1.2000	1.5000	0.2400	0.9400	3500.0000	2.0000L	18.0000
DV152	3.2000	1.6000	1.5000	0.0800	0.3200	1100.0000	2.0000L	14.0000
DV153	3.0000	1.2000	2.0000	0.0700	0.4100	720.0000	2.0000L	12.0000
DV154	2.9000	1.2000	1.7000	0.1100	0.3700	890.0000	2.0000L	10.0000L
DV155	2.7000	0.8400	2.0000	0.1700	0.3800	1100.0000	2.0000L	10.0000L
DV156	2.7000	0.8200	2.3000	0.1200	0.2900	840.0000	2.0000L	10.0000L
DV157	2.7000	1.0000	2.1000	0.1200	0.3700	820.0000	2.0000L	10.0000L
DV158	2.3000	1.5000	2.1000	0.1300	0.9900	1700.0000	2.0000L	13.0000
DV159	2.3000	1.0000	2.5000	0.1000	0.3600	1000.0000	2.0000L	10.0000
DV160	2.1000	1.0000	2.4000	0.0900	0.5000	1600.0000	2.0000L	10.0000
DV161	2.5000	1.3000	2.2000	0.0800	0.4700	1100.0000	2.0000L	10.0000L
DV162	2.7000	1.0000	2.5000	0.0800	0.3300	770.0000	2.0000L	10.0000L
DV163	2.7000	0.9800	2.0000	0.1000	0.3800	1000.0000	2.0000L	10.0000L
DV164	2.7000	0.9200	2.0000	0.1000	0.3900	1200.0000	2.0000L	10.0000L
DV165	2.6000	0.7700	2.1000	0.1000	0.3500	770.0000	2.0000L	11.0000
DV166	2.7000	0.9200	2.1000	0.1000	0.3200	770.0000	2.0000L	10.0000L
DV167	2.7000	1.1000	2.1000	0.0700	0.3600	550.0000	2.0000L	10.0000L
DV168	2.7000	1.2000	2.1000	0.0800	0.3600	550.0000	2.0000L	10.0000L
DV169	2.6000	2.1000	1.8000	0.0600	0.4600	720.0000	2.0000L	10.0000L
DV170	2.7000	1.1000	2.1000	0.0800	0.4100	690.0000	2.0000L	10.0000L
DV171	2.8000	1.0000	2.2000	0.0700	0.4500	600.0000	2.0000L	10.0000L
DV172	2.8000	1.6000	2.1000	0.0600	0.4100	620.0000	2.0000L	10.0000L
DV173	2.7000	1.3000	2.2000	0.0800	0.4200	690.0000	2.0000L	10.0000L
DV174	2.8000	1.5000	2.0000	0.0900	0.3800	560.0000	2.0000L	10.0000L
DV175	2.6000	1.3000	2.0000	0.0800	0.9100	900.0000	2.0000L	10.0000L

APPENDIX 1

FIELD_ID	AU_PPM_S	BA_PPM_S	BE_PPM_S	BI_PPM_S	CD_PPM_S	CE_PPM_S	CO_PPM_S	CR_PPM_S
DV001	8.0000L	550.0000	2.0000	10.0000L	2.0000L	76.0000	10.0000	41.0000
DV002	8.0000L	680.0000	2.0000	10.0000L	2.0000L	99.0000	12.0000	47.0000
DV003	8.0000L	650.0000	2.0000	10.0000L	2.0000L	120.0000	17.0000	71.0000
DV004	8.0000L	590.0000	2.0000	10.0000L	2.0000L	78.0000	12.0000	46.0000
DV005	8.0000L	680.0000	2.0000	10.0000L	2.0000L	91.0000	12.0000	42.0000
DV006	8.0000L	420.0000	1.0000	10.0000L	2.0000L	52.0000	9.0000	32.0000
DV007	8.0000L	820.0000	2.0000	10.0000L	2.0000L	110.0000	15.0000	49.0000
DV008	8.0000L	810.0000	2.0000	10.0000L	2.0000L	100.0000	12.0000	46.0000
DV009	8.0000L	640.0000	2.0000	10.0000L	2.0000L	86.0000	11.0000	40.0000
DV010	8.0000L	880.0000	2.0000	10.0000L	2.0000L	110.0000	13.0000	43.0000
DV011	8.0000L	810.0000	2.0000	10.0000L	2.0000L	99.0000	12.0000	46.0000
DV012	8.0000L	640.0000	2.0000	10.0000L	2.0000L	110.0000	14.0000	54.0000
DV013	8.0000L	540.0000	2.0000	10.0000L	2.0000L	75.0000	12.0000	38.0000
DV014	8.0000L	490.0000	2.0000	10.0000L	2.0000L	58.0000	9.0000	31.0000
DV015	8.0000L	490.0000	2.0000	10.0000L	2.0000L	62.0000	10.0000	39.0000
DV016	8.0000L	400.0000	1.0000	10.0000L	2.0000L	51.0000	8.0000	25.0000
DV017	8.0000L	720.0000	2.0000	10.0000L	2.0000L	94.0000	15.0000	72.0000
DV018	8.0000L	540.0000	2.0000	10.0000L	2.0000L	69.0000	10.0000	40.0000
DV019	8.0000L	500.0000	2.0000	10.0000L	2.0000L	68.0000	10.0000	34.0000
DV020	8.0000L	500.0000	2.0000	10.0000L	2.0000L	64.0000	9.0000	32.0000
DV021	8.0000L	570.0000	2.0000	10.0000L	2.0000L	62.0000	9.0000	33.0000
DV022	8.0000L	440.0000	2.0000	10.0000L	2.0000L	77.0000	13.0000	74.0000
DV023	8.0000L	470.0000	2.0000	10.0000L	2.0000L	60.0000	11.0000	43.0000
DV024	8.0000L	450.0000	2.0000	10.0000L	2.0000L	80.0000	15.0000	88.0000
DV025	8.0000L	520.0000	2.0000	10.0000L	2.0000L	69.0000	12.0000	56.0000
DV026	8.0000L	510.0000	2.0000	10.0000L	2.0000L	75.0000	11.0000	35.0000
DV027	8.0000L	560.0000	2.0000	10.0000L	2.0000L	72.0000	11.0000	33.0000
DV028	8.0000L	560.0000	2.0000	10.0000L	2.0000L	100.0000	14.0000	43.0000
DV029	8.0000L	380.0000	1.0000	10.0000L	2.0000L	52.0000	10.0000	27.0000
DV030	8.0000L	540.0000	2.0000	10.0000L	2.0000L	78.0000	16.0000	33.0000
DV031	8.0000L	600.0000	3.0000	10.0000L	2.0000L	130.0000	13.0000	33.0000
DV032	8.0000L	500.0000	2.0000	10.0000L	2.0000L	84.0000	14.0000	39.0000
DV033	8.0000L	940.0000	2.0000	10.0000L	2.0000L	120.0000	12.0000	38.0000
DV034	8.0000L	730.0000	2.0000	10.0000L	2.0000L	120.0000	12.0000	43.0000
DV035	8.0000L	830.0000	2.0000	10.0000L	2.0000L	110.0000	13.0000	51.0000
DV036	8.0000L	840.0000	2.0000	10.0000L	2.0000L	100.0000	16.0000	53.0000
DV037	8.0000L	740.0000	2.0000	10.0000L	2.0000L	89.0000	18.0000	120.0000
DV038	8.0000L	690.0000	2.0000	10.0000L	2.0000L	76.0000	13.0000	70.0000
DV039	8.0000L	710.0000	2.0000	10.0000L	2.0000L	100.0000	10.0000	51.0000
DV040	8.0000L	820.0000	2.0000	10.0000L	2.0000L	96.0000	10.0000	39.0000
DV041	8.0000L	1000.0000	2.0000	10.0000L	2.0000L	110.0000	8.0000	33.0000
DV042	8.0000L	630.0000	2.0000	10.0000L	2.0000L	63.0000	7.0000	26.0000
DV043	8.0000L	430.0000	2.0000	10.0000L	2.0000L	63.0000	8.0000	28.0000
DV044	8.0000L	600.0000	2.0000	10.0000L	2.0000L	77.0000	8.0000	30.0000
DV045	8.0000L	400.0000	1.0000	10.0000L	2.0000L	51.0000	7.0000	25.0000
DV046	8.0000L	600.0000	2.0000	10.0000L	2.0000L	65.0000	7.0000	22.0000
DV047	8.0000L	620.0000	2.0000	10.0000L	2.0000L	74.0000	7.0000	24.0000
DV048	8.0000L	610.0000	2.0000	10.0000L	2.0000L	82.0000	9.0000	30.0000
DV049	8.0000L	710.0000	2.0000	10.0000L	2.0000L	110.0000	10.0000	26.0000
DV050	8.0000L	600.0000	2.0000	10.0000L	2.0000L	89.0000	16.0000	50.0000
DV051	8.0000L	620.0000	2.0000	10.0000L	2.0000L	96.0000	18.0000	56.0000
DV052	8.0000L	870.0000	2.0000	10.0000L	2.0000L	91.0000	14.0000	38.0000
DV053	8.0000L	750.0000	2.0000	10.0000L	2.0000L	98.0000	9.0000	29.0000
DV054	8.0000L	470.0000	2.0000	10.0000L	2.0000L	72.0000	18.0000	55.0000
DV055	8.0000L	560.0000	2.0000	10.0000L	2.0000L	130.0000	15.0000	53.0000
DV056	8.0000L	690.0000	2.0000	10.0000L	2.0000L	95.0000	9.0000	40.0000
DV057	8.0000L	920.0000	2.0000	10.0000L	2.0000L	89.0000	8.0000	21.0000
DV058	8.0000L	1200.0000	2.0000	10.0000L	2.0000L	78.0000	8.0000	32.0000
DV059	8.0000L	1100.0000	2.0000	10.0000L	2.0000L	66.0000	8.0000	30.0000

APPENDIX 1

FIELD_ID	AU_PPM_S	BA_PPM_S	BE_PPM_S	BI_PPM_S	CD_PPM_S	CE_PPM_S	CO_PPM_S	CR_PPM_S
DV060	8.0000L	480.0000	2.0000	10.0000L	2.0000L	63.0000	13.0000	30.0000
DV061	8.0000L	530.0000	2.0000	10.0000L	2.0000L	80.0000	11.0000	33.0000
DV062	8.0000L	510.0000	2.0000	10.0000L	2.0000L	120.0000	15.0000	39.0000
DV063	8.0000L	510.0000	2.0000	10.0000L	2.0000L	92.0000	14.0000	42.0000
DV064	8.0000L	520.0000	2.0000	10.0000L	2.0000L	85.0000	13.0000	53.0000
DV065	8.0000L	530.0000	2.0000	10.0000L	2.0000L	110.0000	15.0000	40.0000
DV066	8.0000L	550.0000	3.0000	10.0000L	2.0000L	120.0000	13.0000	23.0000
DV067	8.0000L	480.0000	3.0000	10.0000L	2.0000L	130.0000	20.0000	32.0000
DV068	8.0000L	490.0000	3.0000	10.0000L	2.0000L	100.0000	18.0000	68.0000
DV069	8.0000L	340.0000	2.0000	10.0000L	2.0000	210.0000	27.0000	48.0000
DV070	8.0000L	430.0000	2.0000	10.0000L	2.0000L	72.0000	10.0000	39.0000
DV071	8.0000L	440.0000	2.0000	10.0000L	2.0000L	56.0000	10.0000	67.0000
DV072	8.0000L	440.0000	3.0000	10.0000L	2.0000L	95.0000	15.0000	55.0000
DV073	8.0000L	650.0000	2.0000	10.0000L	2.0000L	77.0000	19.0000	68.0000
DV074	8.0000L	370.0000	1.0000	10.0000L	2.0000L	57.0000	11.0000	30.0000
DV075	8.0000L	610.0000	2.0000	10.0000L	2.0000L	110.0000	15.0000	47.0000
DV076	8.0000L	570.0000	2.0000	10.0000L	2.0000L	92.0000	18.0000	79.0000
DV077	8.0000L	590.0000	2.0000	10.0000L	2.0000L	70.0000	19.0000	73.0000
DV078	8.0000L	440.0000	1.0000	10.0000L	2.0000L	57.0000	20.0000	130.0000
DV079	8.0000L	480.0000	1.0000	10.0000L	2.0000L	73.0000	20.0000	120.0000
DV080	8.0000L	450.0000	2.0000	10.0000L	2.0000L	78.0000	19.0000	63.0000
DV081	8.0000L	580.0000	7.0000	10.0000L	2.0000L	85.0000	19.0000	66.0000
DV082	8.0000L	660.0000	3.0000	10.0000L	2.0000L	87.0000	17.0000	47.0000
DV083	8.0000L	640.0000	3.0000	10.0000L	2.0000L	86.0000	21.0000	61.0000
DV084	8.0000L	610.0000	3.0000	10.0000L	2.0000L	98.0000	19.0000	39.0000
DV085	8.0000L	610.0000	2.0000	10.0000L	2.0000L	84.0000	21.0000	54.0000
DV086	8.0000L	620.0000	2.0000	10.0000L	2.0000L	86.0000	23.0000	50.0000
DV087	8.0000L	630.0000	2.0000	10.0000L	2.0000L	94.0000	18.0000	75.0000
DV088	8.0000L	590.0000	2.0000	10.0000L	2.0000L	91.0000	24.0000	100.0000
DV089	8.0000L	440.0000	2.0000	10.0000L	2.0000L	88.0000	17.0000	50.0000
DV090	8.0000L	550.0000	2.0000	10.0000L	2.0000L	83.0000	19.0000	66.0000
DV091	8.0000L	620.0000	2.0000	10.0000L	2.0000L	80.0000	33.0000	140.0000
DV092	8.0000L	600.0000	2.0000	10.0000L	2.0000L	84.0000	21.0000	100.0000
DV093	8.0000L	620.0000	2.0000	10.0000L	2.0000L	88.0000	13.0000	31.0000
DV094	8.0000L	580.0000	2.0000	10.0000L	2.0000L	92.0000	12.0000	34.0000
DV095	8.0000L	620.0000	2.0000	10.0000L	2.0000L	87.0000	17.0000	33.0000
DV096	8.0000L	490.0000	2.0000	10.0000L	2.0000L	91.0000	14.0000	43.0000
DV097	8.0000L	660.0000	1.0000	10.0000L	2.0000L	61.0000	8.0000	27.0000
DV098	8.0000L	580.0000	1.0000	10.0000L	2.0000L	66.0000	11.0000	18.0000
DV099	8.0000L	1000.0000	2.0000	10.0000L	2.0000L	83.0000	12.0000	25.0000
DV100	8.0000L	1100.0000	2.0000	10.0000L	2.0000L	110.0000	18.0000	83.0000
DV101	8.0000L	980.0000	2.0000	10.0000L	2.0000L	80.0000	15.0000	40.0000
DV102	8.0000L	650.0000	1.0000	10.0000L	2.0000L	61.0000	23.0000	88.0000
DV103	8.0000L	430.0000	1.0000	10.0000L	2.0000L	51.0000	8.0000	21.0000
DV104	8.0000L	650.0000	2.0000	10.0000L	2.0000L	57.0000	22.0000	84.0000
DV105	8.0000L	540.0000	2.0000	10.0000L	2.0000L	51.0000	9.0000	23.0000
DV106	8.0000L	680.0000	2.0000	10.0000L	2.0000L	53.0000	19.0000	77.0000
DV107	8.0000L	440.0000	1.0000	10.0000L	2.0000L	61.0000	9.0000	29.0000
DV108	8.0000L	630.0000	2.0000	10.0000L	2.0000L	87.0000	14.0000	38.0000
DV109	8.0000L	640.0000	2.0000	10.0000L	2.0000L	86.0000	17.0000	51.0000
DV110	8.0000L	560.0000	2.0000	10.0000L	2.0000L	88.0000	17.0000	55.0000
DV111	8.0000L	700.0000	2.0000	10.0000L	2.0000L	81.0000	15.0000	48.0000
DV112	8.0000L	530.0000	2.0000	10.0000L	2.0000L	73.0000	14.0000	38.0000
DV113	8.0000L	650.0000	2.0000	10.0000L	2.0000L	59.0000	13.0000	42.0000
DV114	8.0000L	770.0000	2.0000	10.0000L	2.0000L	52.0000	19.0000	61.0000
DV115	8.0000L	720.0000	2.0000	10.0000L	2.0000L	54.0000	16.0000	56.0000
DV116	8.0000L	680.0000	2.0000	10.0000L	2.0000L	51.0000	21.0000	91.0000
DV117	8.0000L	1800.0000	2.0000	10.0000L	2.0000L	70.0000	14.0000	37.0000
DV118	8.0000L	1100.0000	2.0000	10.0000L	2.0000L	66.0000	12.0000	28.0000

APPENDIX 1

FIELD_ID	AU_PPM_S	BA_PPM_S	BE_PPM_S	BI_PPM_S	CD_PPM_S	CE_PPM_S	CO_PPM_S	CR_PPM_S
DV119	8.0000L	1500.0000	2.0000	10.0000L	2.0000L	75.0000	30.0000	56.0000
DV120	8.0000L	5500.0000	2.0000	10.0000L	2.0000L	66.0000	12.0000	27.0000
DV121	8.0000L	3300.0000	2.0000	10.0000L	2.0000L	80.0000	10.0000	28.0000
DV122	8.0000L	3100.0000	2.0000	10.0000L	2.0000L	75.0000	12.0000	36.0000
DV123	8.0000L	1000.0000	2.0000	10.0000L	2.0000L	73.0000	19.0000	63.0000
DV124	8.0000L	750.0000	1.0000	10.0000L	2.0000L	110.0000	38.0000	110.0000
DV125	8.0000L	760.0000	2.0000	10.0000L	2.0000L	92.0000	23.0000	78.0000
DV126	8.0000L	750.0000	2.0000	10.0000L	2.0000L	96.0000	28.0000	91.0000
DV127	8.0000L	870.0000	2.0000	10.0000L	2.0000L	98.0000	20.0000	75.0000
DV128	8.0000L	1200.0000	2.0000	10.0000L	2.0000L	94.0000	16.0000	45.0000
DV129	8.0000L	890.0000	2.0000	10.0000L	2.0000L	120.0000	11.0000	37.0000
DV130	8.0000L	1000.0000	2.0000	10.0000L	2.0000L	110.0000	12.0000	44.0000
DV131	8.0000L	1100.0000	2.0000	10.0000L	2.0000L	120.0000	13.0000	54.0000
DV132	8.0000L	960.0000	2.0000	10.0000L	2.0000L	130.0000	16.0000	89.0000
DV133	8.0000L	430.0000	3.0000	10.0000L	2.0000L	79.0000	15.0000	40.0000
DV134	8.0000L	460.0000	2.0000	10.0000L	2.0000L	82.0000	12.0000	42.0000
DV135	8.0000L	490.0000	2.0000	10.0000L	2.0000L	95.0000	11.0000	38.0000
DV136	8.0000L	510.0000	2.0000	10.0000L	2.0000L	84.0000	11.0000	40.0000
DV137	8.0000L	620.0000	2.0000	10.0000L	2.0000L	150.0000	10.0000	31.0000
DV138	8.0000L	670.0000	3.0000	10.0000L	2.0000L	130.0000	8.0000	22.0000
DV139	8.0000L	540.0000	2.0000	10.0000L	2.0000L	88.0000	11.0000	39.0000
DV140	8.0000L	470.0000	2.0000	10.0000L	2.0000L	87.0000	11.0000	45.0000
DV141	8.0000L	540.0000	2.0000	10.0000L	2.0000L	68.0000	17.0000	50.0000
DV142	8.0000L	1000.0000	2.0000	10.0000L	2.0000L	110.0000	18.0000	60.0000
DV143	8.0000L	720.0000	2.0000	10.0000L	2.0000L	88.0000	15.0000	47.0000
DV144	8.0000L	1200.0000	2.0000	10.0000L	2.0000L	100.0000	20.0000	89.0000
DV145	8.0000L	870.0000	2.0000	10.0000L	2.0000L	95.0000	14.0000	55.0000
DV146	8.0000L	790.0000	2.0000	10.0000L	2.0000L	120.0000	12.0000	56.0000
DV147	8.0000L	1100.0000	2.0000	10.0000L	2.0000L	100.0000	13.0000	39.0000
DV148	8.0000L	3000.0000	2.0000	10.0000L	2.0000L	110.0000	22.0000	54.0000
DV149	8.0000L	890.0000	2.0000	10.0000L	2.0000L	89.0000	18.0000	99.0000
DV150	8.0000L	750.0000	2.0000	10.0000L	2.0000L	82.0000	18.0000	97.0000
DV151	8.0000L	5300.0000	2.0000	10.0000L	2.0000L	140.0000	22.0000	45.0000
DV152	8.0000L	1600.0000	2.0000	10.0000L	2.0000L	93.0000	12.0000	32.0000
DV153	8.0000L	880.0000	2.0000	10.0000L	2.0000L	76.0000	11.0000	41.0000
DV154	8.0000L	1000.0000	2.0000	10.0000L	2.0000L	90.0000	12.0000	39.0000
DV155	8.0000L	1100.0000	2.0000	10.0000L	2.0000L	150.0000	10.0000	34.0000
DV156	8.0000L	940.0000	2.0000	10.0000L	2.0000L	140.0000	8.0000	25.0000
DV157	8.0000L	1300.0000	2.0000	10.0000L	2.0000L	140.0000	10.0000	38.0000
DV158	8.0000L	920.0000	2.0000	10.0000L	2.0000L	140.0000	19.0000	80.0000
DV159	8.0000L	750.0000	3.0000	10.0000L	2.0000L	90.0000	12.0000	37.0000
DV160	8.0000L	620.0000	2.0000	10.0000L	2.0000L	350.0000	10.0000	31.0000
DV161	8.0000L	680.0000	2.0000	10.0000L	2.0000L	190.0000	11.0000	40.0000
DV162	8.0000L	670.0000	2.0000	10.0000L	2.0000L	100.0000	9.0000	27.0000
DV163	8.0000L	740.0000	2.0000	10.0000L	2.0000L	100.0000	15.0000	37.0000
DV164	8.0000L	1100.0000	2.0000	10.0000L	2.0000L	86.0000	13.0000	37.0000
DV165	8.0000L	1000.0000	2.0000	10.0000L	2.0000L	85.0000	11.0000	30.0000
DV166	8.0000L	810.0000	2.0000	10.0000L	2.0000L	78.0000	10.0000	26.0000
DV167	8.0000L	720.0000	2.0000	10.0000L	2.0000L	84.0000	9.0000	30.0000
DV168	8.0000L	730.0000	2.0000	10.0000L	2.0000L	86.0000	9.0000	33.0000
DV169	8.0000L	640.0000	2.0000	10.0000L	2.0000L	84.0000	12.0000	37.0000
DV170	8.0000L	730.0000	2.0000	10.0000L	2.0000L	86.0000	11.0000	39.0000
DV171	8.0000L	770.0000	2.0000	10.0000L	2.0000L	87.0000	11.0000	32.0000
DV172	8.0000L	730.0000	2.0000	10.0000L	2.0000L	67.0000	12.0000	32.0000
DV173	8.0000L	800.0000	2.0000	10.0000L	2.0000L	84.0000	13.0000	32.0000
DV174	8.0000L	830.0000	2.0000	10.0000L	2.0000L	74.0000	12.0000	37.0000
DV175	8.0000L	690.0000	2.0000	10.0000L	2.0000L	89.0000	14.0000	43.0000

APPENDIX 1

FIELD_ID	CU_PPM_S	EU_PPM_S	GA_PPM_S	HO_PPM_S	LA_PPM_S	LI_PPM_S	MO_PPM_S	NB_PPM_S
DV001	13.0000	2.0000L	16.0000	4.0000L	44.0000	32.0000	2.0000L	12.0000
DV002	15.0000	2.0000L	17.0000	4.0000L	58.0000	30.0000	2.0000L	12.0000
DV003	15.0000	2.0000L	17.0000	4.0000L	69.0000	32.0000	2.0000L	13.0000
DV004	16.0000	2.0000L	13.0000	4.0000L	46.0000	31.0000	2.0000L	5.0000
DV005	16.0000	2.0000L	15.0000	4.0000L	53.0000	30.0000	2.0000L	7.0000
DV006	12.0000	2.0000L	11.0000	4.0000L	30.0000	27.0000	2.0000L	4.0000
DV007	13.0000	2.0000L	16.0000	4.0000L	67.0000	25.0000	2.0000L	15.0000
DV008	13.0000	2.0000L	16.0000	4.0000L	61.0000	34.0000	2.0000L	12.0000
DV009	19.0000	2.0000L	17.0000	4.0000L	50.0000	61.0000	2.0000L	12.0000
DV010	11.0000	2.0000L	16.0000	4.0000L	67.0000	25.0000	2.0000L	12.0000
DV011	12.0000	2.0000L	16.0000	4.0000L	58.0000	19.0000	2.0000L	9.0000
DV012	16.0000	2.0000L	15.0000	4.0000L	61.0000	24.0000	2.0000L	12.0000
DV013	19.0000	2.0000L	14.0000	4.0000L	44.0000	32.0000	2.0000L	10.0000
DV014	15.0000	2.0000L	13.0000	4.0000L	34.0000	31.0000	2.0000L	6.0000
DV015	18.0000	2.0000L	12.0000	4.0000L	38.0000	34.0000	2.0000L	7.0000
DV016	14.0000	2.0000L	10.0000	4.0000L	30.0000	24.0000	2.0000L	4.0000L
DV017	13.0000	2.0000L	14.0000	4.0000L	55.0000	21.0000	2.0000L	6.0000
DV018	12.0000	2.0000L	13.0000	4.0000L	42.0000	24.0000	2.0000L	5.0000
DV019	16.0000	2.0000L	13.0000	4.0000L	41.0000	33.0000	2.0000L	6.0000
DV020	15.0000	2.0000L	13.0000	4.0000L	38.0000	28.0000	2.0000L	8.0000
DV021	19.0000	2.0000L	14.0000	4.0000L	37.0000	36.0000	2.0000L	10.0000
DV022	20.0000	2.0000L	17.0000	4.0000L	46.0000	60.0000	2.0000L	9.0000
DV023	21.0000	2.0000L	14.0000	4.0000L	37.0000	47.0000	2.0000L	10.0000
DV024	22.0000	2.0000L	18.0000	4.0000L	48.0000	74.0000	2.0000L	9.0000
DV025	23.0000	2.0000L	16.0000	4.0000L	42.0000	50.0000	2.0000L	11.0000
DV026	25.0000	2.0000L	13.0000	4.0000L	44.0000	34.0000	2.0000L	6.0000
DV027	21.0000	2.0000L	14.0000	4.0000L	43.0000	34.0000	2.0000L	11.0000
DV028	56.0000	2.0000L	17.0000	4.0000L	56.0000	39.0000	2.0000L	13.0000
DV029	20.0000	2.0000L	10.0000	4.0000L	32.0000	23.0000	2.0000L	4.0000L
DV030	47.0000	2.0000L	16.0000	4.0000L	45.0000	39.0000	2.0000L	9.0000
DV031	29.0000	2.0000L	19.0000	4.0000L	75.0000	36.0000	2.0000L	20.0000
DV032	29.0000	2.0000L	17.0000	4.0000L	48.0000	38.0000	2.0000L	13.0000
DV033	13.0000	2.0000L	20.0000	4.0000L	70.0000	34.0000	2.0000L	20.0000
DV034	17.0000	2.0000L	18.0000	4.0000L	72.0000	40.0000	2.0000L	19.0000
DV035	14.0000	2.0000L	18.0000	4.0000L	70.0000	40.0000	2.0000L	18.0000
DV036	19.0000	2.0000L	18.0000	4.0000L	60.0000	73.0000	2.0000L	19.0000
DV037	15.0000	2.0000L	15.0000	4.0000L	54.0000	43.0000	2.0000L	15.0000
DV038	13.0000	2.0000L	13.0000	4.0000L	44.0000	55.0000	2.0000L	8.0000
DV039	9.0000	2.0000L	17.0000	4.0000L	63.0000	39.0000	2.0000L	15.0000
DV040	16.0000	2.0000L	17.0000	4.0000L	55.0000	39.0000	2.0000L	17.0000
DV041	10.0000	2.0000L	16.0000	4.0000L	69.0000	33.0000	2.0000L	15.0000
DV042	14.0000	2.0000L	13.0000	4.0000L	38.0000	31.0000	2.0000L	9.0000
DV043	11.0000	2.0000L	11.0000	4.0000L	38.0000	29.0000	2.0000L	7.0000
DV044	9.0000	2.0000L	13.0000	4.0000L	43.0000	26.0000	2.0000L	10.0000
DV045	11.0000	2.0000L	11.0000	4.0000L	31.0000	25.0000	2.0000L	7.0000
DV046	13.0000	2.0000L	14.0000	4.0000L	38.0000	51.0000	2.0000L	10.0000
DV047	11.0000	2.0000L	13.0000	4.0000L	44.0000	32.0000	2.0000L	10.0000
DV048	12.0000	2.0000L	14.0000	4.0000L	46.0000	40.0000	2.0000L	8.0000
DV049	10.0000	2.0000L	13.0000	4.0000L	61.0000	26.0000	2.0000L	10.0000
DV050	21.0000	2.0000L	15.0000	4.0000L	45.0000	46.0000	2.0000L	6.0000
DV051	23.0000	2.0000L	16.0000	4.0000L	51.0000	47.0000	2.0000L	9.0000
DV052	18.0000	2.0000L	16.0000	4.0000L	53.0000	47.0000	2.0000L	9.0000
DV053	13.0000	2.0000L	16.0000	4.0000L	57.0000	61.0000	2.0000L	12.0000
DV054	43.0000	2.0000L	17.0000	4.0000L	43.0000	37.0000	2.0000L	8.0000
DV055	23.0000	2.0000L	16.0000	4.0000L	75.0000	50.0000	2.0000L	9.0000
DV056	12.0000	2.0000L	16.0000	4.0000L	55.0000	71.0000	2.0000L	15.0000
DV057	16.0000	2.0000L	17.0000	4.0000L	53.0000	120.0000	3.0000	13.0000
DV058	17.0000	2.0000L	15.0000	4.0000L	45.0000	60.0000	2.0000L	9.0000
DV059	18.0000	2.0000L	14.0000	4.0000L	40.0000	54.0000	2.0000L	11.0000

APPENDIX 1

FIELD_ID	CU_PPM_S	EU_PPM_S	GA_PPM_S	HO_PPM_S	LA_PPM_S	LI_PPM_S	MO_PPM_S	NB_PPM_S
DV060	17.0000	2.0000L	14.0000	4.0000L	35.0000	36.0000	2.0000L	8.0000
DV061	20.0000	2.0000L	15.0000	4.0000L	48.0000	44.0000	2.0000L	9.0000
DV062	21.0000	2.0000L	15.0000	4.0000L	66.0000	26.0000	2.0000L	13.0000
DV063	23.0000	2.0000L	17.0000	4.0000L	53.0000	51.0000	2.0000L	9.0000
DV064	21.0000	2.0000L	15.0000	4.0000L	49.0000	44.0000	2.0000L	12.0000
DV065	36.0000	2.0000L	18.0000	4.0000L	63.0000	45.0000	2.0000L	18.0000
DV066	40.0000	2.0000L	18.0000	4.0000L	71.0000	35.0000	2.0000L	20.0000
DV067	100.0000	2.0000L	19.0000	4.0000L	75.0000	63.0000	2.0000L	19.0000
DV068	71.0000	2.0000L	18.0000	4.0000L	61.0000	51.0000	2.0000	14.0000
DV069	41.0000	3.0000	19.0000	4.0000L	110.0000	28.0000	2.0000L	30.0000
DV070	19.0000	2.0000L	13.0000	4.0000L	41.0000	31.0000	2.0000L	11.0000
DV071	21.0000	2.0000L	11.0000	4.0000L	36.0000	29.0000	3.0000	6.0000
DV072	34.0000	2.0000L	18.0000	4.0000L	54.0000	38.0000	2.0000L	16.0000
DV073	37.0000	2.0000L	19.0000	4.0000L	45.0000	45.0000	2.0000L	7.0000
DV074	20.0000	2.0000L	12.0000	4.0000L	33.0000	31.0000	2.0000L	9.0000
DV075	28.0000	2.0000L	16.0000	4.0000L	63.0000	39.0000	2.0000L	9.0000
DV076	27.0000	2.0000L	16.0000	4.0000L	52.0000	36.0000	2.0000L	13.0000
DV077	33.0000	2.0000L	19.0000	4.0000L	41.0000	42.0000	2.0000L	9.0000
DV078	28.0000	2.0000L	12.0000	4.0000L	32.0000	23.0000	2.0000L	7.0000
DV079	29.0000	2.0000L	13.0000	4.0000L	40.0000	21.0000	2.0000L	5.0000
DV080	38.0000	2.0000L	16.0000	4.0000L	46.0000	36.0000	2.0000	8.0000
DV081	31.0000	2.0000L	23.0000	4.0000L	49.0000	55.0000	2.0000L	11.0000
DV082	29.0000	2.0000L	19.0000	4.0000L	50.0000	46.0000	2.0000L	13.0000
DV083	39.0000	2.0000L	22.0000	4.0000L	48.0000	59.0000	2.0000L	10.0000
DV084	28.0000	2.0000L	19.0000	4.0000L	56.0000	42.0000	2.0000L	10.0000
DV085	33.0000	2.0000L	19.0000	4.0000L	47.0000	46.0000	2.0000L	11.0000
DV086	35.0000	2.0000L	19.0000	4.0000L	48.0000	39.0000	2.0000L	12.0000
DV087	38.0000	2.0000L	18.0000	4.0000L	55.0000	44.0000	2.0000L	16.0000
DV088	44.0000	2.0000L	21.0000	4.0000L	53.0000	50.0000	2.0000L	21.0000
DV089	25.0000	2.0000L	17.0000	4.0000L	51.0000	44.0000	2.0000L	7.0000
DV090	32.0000	2.0000L	18.0000	4.0000L	47.0000	47.0000	2.0000L	9.0000
DV091	72.0000	2.0000L	17.0000	4.0000L	45.0000	37.0000	2.0000L	11.0000
DV092	15.0000	2.0000L	16.0000	4.0000L	47.0000	26.0000	2.0000L	13.0000
DV093	18.0000	2.0000L	16.0000	4.0000L	46.0000	43.0000	2.0000L	9.0000
DV094	16.0000	2.0000L	14.0000	4.0000L	52.0000	44.0000	2.0000L	8.0000
DV095	18.0000	2.0000L	15.0000	4.0000L	49.0000	58.0000	2.0000L	9.0000
DV096	19.0000	2.0000L	13.0000	4.0000L	49.0000	38.0000	2.0000L	5.0000
DV097	10.0000	2.0000L	13.0000	4.0000L	34.0000	40.0000	2.0000L	4.0000
DV098	12.0000	2.0000L	13.0000	4.0000L	36.0000	80.0000	2.0000L	4.0000L
DV099	20.0000	2.0000L	20.0000	4.0000L	51.0000	41.0000	2.0000L	11.0000
DV100	21.0000	2.0000L	20.0000	4.0000L	66.0000	32.0000	2.0000L	14.0000
DV101	18.0000	2.0000L	19.0000	4.0000L	46.0000	44.0000	2.0000L	12.0000
DV102	26.0000	2.0000L	19.0000	4.0000L	38.0000	200.0000	2.0000L	11.0000
DV103	10.0000	2.0000L	9.0000	4.0000L	30.0000	49.0000	2.0000L	5.0000
DV104	29.0000	2.0000L	16.0000	4.0000L	34.0000	340.0000	4.0000	7.0000
DV105	12.0000	2.0000L	13.0000	4.0000L	30.0000	89.0000	2.0000L	5.0000
DV106	28.0000	2.0000L	17.0000	4.0000L	32.0000	410.0000	6.0000	4.0000
DV107	12.0000	2.0000L	12.0000	4.0000L	36.0000	56.0000	2.0000L	4.0000L
DV108	17.0000	2.0000L	16.0000	4.0000L	48.0000	39.0000	2.0000L	9.0000
DV109	25.0000	2.0000L	19.0000	4.0000L	47.0000	47.0000	2.0000L	7.0000
DV110	18.0000	2.0000L	17.0000	4.0000L	48.0000	50.0000	2.0000L	6.0000
DV111	22.0000	2.0000L	18.0000	4.0000L	44.0000	67.0000	2.0000L	11.0000
DV112	17.0000	2.0000L	16.0000	4.0000L	38.0000	46.0000	2.0000L	7.0000
DV113	20.0000	2.0000L	16.0000	4.0000L	36.0000	150.0000	2.0000L	11.0000
DV114	30.0000	2.0000L	16.0000	4.0000L	31.0000	200.0000	2.0000L	10.0000
DV115	23.0000	2.0000L	18.0000	4.0000L	34.0000	140.0000	2.0000L	11.0000
DV116	29.0000	2.0000L	17.0000	4.0000L	32.0000	150.0000	2.0000L	9.0000
DV117	18.0000	2.0000L	20.0000	4.0000L	43.0000	51.0000	2.0000L	12.0000
DV118	26.0000	2.0000L	19.0000	4.0000L	40.0000	40.0000	2.0000L	8.0000

APPENDIX 1

FIELD_ID	CU_PPM_S	EU_PPM_S	GA_PPM_S	HO_PPM_S	LA_PPM_S	Li_PPM_S	MO_PPM_S	NB_PPM_S
DV119	35.0000	2.0000L	19.0000	4.0000L	44.0000	37.0000	2.0000L	9.0000
DV120	64.0000	2.0000L	19.0000	4.0000L	42.0000	32.0000	2.0000L	10.0000
DV121	22.0000	2.0000L	19.0000	4.0000L	50.0000	36.0000	2.0000L	9.0000
DV122	31.0000	2.0000L	18.0000	4.0000L	48.0000	43.0000	2.0000L	10.0000
DV123	21.0000	2.0000L	17.0000	4.0000L	43.0000	46.0000	2.0000L	12.0000
DV124	85.0000	2.0000	23.0000	4.0000L	66.0000	29.0000	2.0000L	11.0000
DV125	23.0000	2.0000L	18.0000	4.0000L	57.0000	29.0000	2.0000L	12.0000
DV126	32.0000	2.0000L	20.0000	4.0000L	58.0000	42.0000	2.0000L	13.0000
DV127	67.0000	2.0000L	18.0000	4.0000L	59.0000	40.0000	2.0000L	10.0000
DV128	83.0000	2.0000L	17.0000	4.0000L	54.0000	40.0000	2.0000L	8.0000
DV129	14.0000	2.0000L	19.0000	4.0000L	69.0000	27.0000	2.0000L	11.0000
DV130	14.0000	2.0000L	18.0000	4.0000L	65.0000	23.0000	2.0000L	6.0000
DV131	20.0000	2.0000L	18.0000	4.0000L	69.0000	26.0000	2.0000L	13.0000
DV132	17.0000	2.0000L	19.0000	4.0000L	77.0000	32.0000	2.0000L	17.0000
DV133	29.0000	2.0000L	14.0000	4.0000L	46.0000	31.0000	2.0000L	5.0000
DV134	19.0000	2.0000L	14.0000	4.0000L	45.0000	35.0000	2.0000L	5.0000
DV135	15.0000	2.0000L	13.0000	4.0000L	52.0000	24.0000	2.0000L	9.0000
DV136	19.0000	2.0000L	14.0000	4.0000L	46.0000	23.0000	2.0000L	5.0000
DV137	11.0000	2.0000L	15.0000	4.0000L	87.0000	24.0000	2.0000L	21.0000
DV138	10.0000	2.0000L	17.0000	4.0000L	78.0000	20.0000	2.0000L	19.0000
DV139	17.0000	2.0000L	14.0000	4.0000L	48.0000	37.0000	2.0000L	10.0000
DV140	15.0000	2.0000L	13.0000	4.0000L	47.0000	27.0000	2.0000L	7.0000
DV141	26.0000	2.0000L	16.0000	4.0000L	39.0000	39.0000	2.0000L	9.0000
DV142	31.0000	2.0000L	21.0000	4.0000L	64.0000	34.0000	2.0000L	13.0000
DV143	19.0000	2.0000L	16.0000	4.0000L	50.0000	24.0000	2.0000L	10.0000
DV144	21.0000	2.0000L	21.0000	4.0000L	59.0000	23.0000	2.0000L	12.0000
DV145	25.0000	2.0000L	18.0000	4.0000L	57.0000	33.0000	2.0000L	12.0000
DV146	14.0000	2.0000L	17.0000	4.0000L	72.0000	24.0000	2.0000L	15.0000
DV147	20.0000	2.0000L	20.0000	4.0000L	60.0000	68.0000	2.0000L	15.0000
DV148	43.0000	2.0000L	21.0000	4.0000L	63.0000	34.0000	2.0000L	14.0000
DV149	24.0000	2.0000L	17.0000	4.0000L	52.0000	32.0000	2.0000L	10.0000
DV150	24.0000	2.0000L	17.0000	4.0000L	48.0000	32.0000	2.0000L	11.0000
DV151	37.0000	2.0000L	23.0000	4.0000L	79.0000	38.0000	2.0000L	14.0000
DV152	19.0000	2.0000L	18.0000	4.0000L	54.0000	40.0000	2.0000L	11.0000
DV153	15.0000	2.0000L	18.0000	4.0000L	46.0000	39.0000	2.0000L	13.0000
DV154	20.0000	2.0000L	17.0000	4.0000L	52.0000	32.0000	2.0000L	9.0000
DV155	14.0000	2.0000L	16.0000	4.0000L	82.0000	22.0000	2.0000L	10.0000
DV156	12.0000	2.0000L	16.0000	4.0000L	81.0000	22.0000	2.0000L	9.0000
DV157	17.0000	2.0000L	16.0000	4.0000L	79.0000	30.0000	2.0000L	10.0000
DV158	24.0000	2.0000L	21.0000	4.0000L	86.0000	55.0000	2.0000L	24.0000
DV159	16.0000	2.0000L	19.0000	4.0000L	52.0000	57.0000	2.0000L	17.0000
DV160	13.0000	2.0000L	20.0000	4.0000L	210.0000	89.0000	2.0000L	40.0000
DV161	17.0000	2.0000L	19.0000	4.0000L	110.0000	37.0000	2.0000L	24.0000
DV162	13.0000	2.0000L	18.0000	4.0000L	60.0000	32.0000	2.0000L	14.0000
DV163	22.0000	2.0000L	17.0000	4.0000L	61.0000	25.0000	2.0000L	10.0000
DV164	17.0000	2.0000L	17.0000	4.0000L	52.0000	53.0000	2.0000L	11.0000
DV165	14.0000	2.0000L	17.0000	4.0000L	50.0000	38.0000	2.0000L	10.0000
DV166	15.0000	2.0000L	16.0000	4.0000L	46.0000	40.0000	2.0000L	10.0000
DV167	9.0000	2.0000L	15.0000	4.0000L	47.0000	23.0000	2.0000L	9.0000
DV168	10.0000	2.0000L	15.0000	4.0000L	49.0000	25.0000	2.0000L	11.0000
DV169	19.0000	2.0000L	16.0000	4.0000L	49.0000	30.0000	2.0000L	11.0000
DV170	11.0000	2.0000L	16.0000	4.0000L	50.0000	21.0000	2.0000L	8.0000
DV171	11.0000	2.0000L	16.0000	4.0000L	50.0000	18.0000	2.0000L	11.0000
DV172	19.0000	2.0000L	16.0000	4.0000L	40.0000	27.0000	2.0000L	10.0000
DV173	17.0000	2.0000L	16.0000	4.0000L	50.0000	23.0000	2.0000L	11.0000
DV174	15.0000	2.0000L	16.0000	4.0000L	44.0000	22.0000	2.0000L	9.0000
DV175	14.0000	2.0000L	16.0000	4.0000L	51.0000	23.0000	2.0000L	13.0000

APPENDIX 1

FIELD_ID	ND_PPM_S	LI_PPM_S	PB_PPM_S	SC_PPM_S	SN_PPM_S	SR_PPM_S	TA_PPM_S	TH_PPM_S
DV001	35.0000	19.0000	15.0000	7.0000	5.0000L	420.0000	40.0000L	10.0000
DV002	43.0000	21.0000	14.0000	8.0000	5.0000L	530.0000	40.0000L	12.0000
DV003	50.0000	36.0000	14.0000	10.0000	5.0000L	530.0000	40.0000L	11.0000
DV004	38.0000	22.0000	15.0000	7.0000	5.0000L	480.0000	40.0000L	9.0000
DV005	39.0000	21.0000	19.0000	8.0000	5.0000L	510.0000	40.0000L	9.0000
DV006	29.0000	15.0000	10.0000	6.0000	5.0000L	310.0000	40.0000L	6.0000
DV007	50.0000	25.0000	14.0000	8.0000	5.0000L	580.0000	40.0000L	39.0000
DV008	45.0000	19.0000	13.0000	8.0000	5.0000L	540.0000	40.0000L	12.0000
DV009	40.0000	18.0000	14.0000	9.0000	5.0000L	340.0000	40.0000L	13.0000
DV010	45.0000	18.0000	15.0000	7.0000	5.0000L	600.0000	40.0000L	13.0000
DV011	44.0000	16.0000	17.0000	7.0000	5.0000L	510.0000	40.0000L	10.0000
DV012	48.0000	24.0000	12.0000	9.0000	5.0000L	420.0000	40.0000L	17.0000
DV013	35.0000	19.0000	12.0000	8.0000	5.0000L	380.0000	40.0000L	11.0000
DV014	28.0000	15.0000	12.0000	7.0000	5.0000L	330.0000	40.0000L	9.0000
DV015	30.0000	19.0000	11.0000	7.0000	5.0000L	350.0000	40.0000L	8.0000
DV016	28.0000	14.0000	14.0000	5.0000	5.0000L	310.0000	40.0000L	7.0000
DV017	42.0000	31.0000	11.0000	8.0000	5.0000L	580.0000	40.0000L	12.0000
DV018	31.0000	17.0000	10.0000	6.0000	5.0000L	420.0000	40.0000L	7.0000
DV019	32.0000	17.0000	11.0000	7.0000	5.0000L	370.0000	40.0000L	9.0000
DV020	32.0000	14.0000	11.0000	7.0000	5.0000L	380.0000	40.0000L	9.0000
DV021	32.0000	18.0000	13.0000	7.0000	5.0000L	400.0000	40.0000L	9.0000
DV022	39.0000	36.0000	16.0000	11.0000	5.0000L	350.0000	40.0000L	10.0000
DV023	30.0000	23.0000	14.0000	8.0000	5.0000L	340.0000	40.0000L	13.0000
DV024	39.0000	43.0000	11.0000	12.0000	5.0000L	340.0000	40.0000L	13.0000
DV025	36.0000	29.0000	10.0000	10.0000	5.0000L	440.0000	40.0000L	11.0000
DV026	41.0000	19.0000	11.0000	8.0000	5.0000L	490.0000	40.0000L	12.0000
DV027	37.0000	17.0000	14.0000	9.0000	5.0000L	420.0000	40.0000L	10.0000
DV028	46.0000	21.0000	50.0000	9.0000	5.0000L	450.0000	40.0000L	13.0000
DV029	36.0000	16.0000	11.0000	6.0000	5.0000L	400.0000	40.0000L	11.0000
DV030	36.0000	17.0000	48.0000	8.0000	5.0000L	460.0000	40.0000L	10.0000
DV031	60.0000	15.0000	10.0000	9.0000	5.0000L	610.0000	40.0000L	19.0000
DV032	42.0000	20.0000	15.0000	9.0000	5.0000L	520.0000	40.0000L	13.0000
DV033	52.0000	19.0000	21.0000	9.0000	5.0000L	590.0000	40.0000L	16.0000
DV034	47.0000	19.0000	19.0000	9.0000	5.0000L	490.0000	40.0000L	18.0000
DV035	44.0000	26.0000	19.0000	9.0000	5.0000L	550.0000	40.0000L	17.0000
DV036	48.0000	30.0000	13.0000	9.0000	5.0000L	580.0000	40.0000L	16.0000
DV037	43.0000	40.0000	43.0000	11.0000	5.0000L	680.0000	40.0000L	11.0000
DV038	38.0000	29.0000	9.0000	8.0000	5.0000L	740.0000	40.0000L	9.0000
DV039	43.0000	22.0000	18.0000	7.0000	5.0000L	440.0000	40.0000L	17.0000
DV040	41.0000	17.0000	20.0000	8.0000	5.0000L	480.0000	40.0000L	15.0000
DV041	47.0000	15.0000	20.0000	6.0000	5.0000L	360.0000	40.0000L	16.0000
DV042	32.0000	15.0000	16.0000	5.0000	5.0000L	300.0000	40.0000L	11.0000
DV043	33.0000	14.0000	12.0000	6.0000	5.0000L	220.0000	40.0000L	10.0000
DV044	40.0000	12.0000	12.0000	6.0000	5.0000L	480.0000	40.0000L	9.0000
DV045	29.0000	12.0000	12.0000	5.0000	5.0000L	300.0000	40.0000L	8.0000
DV046	31.0000	11.0000	17.0000	5.0000	5.0000L	290.0000	40.0000L	12.0000
DV047	36.0000	10.0000	16.0000	5.0000	5.0000L	470.0000	40.0000L	10.0000
DV048	39.0000	13.0000	16.0000	7.0000	5.0000L	380.0000	40.0000L	11.0000
DV049	47.0000	11.0000	19.0000	6.0000	5.0000L	480.0000	40.0000L	17.0000
DV050	39.0000	22.0000	19.0000	10.0000	5.0000L	190.0000	40.0000L	13.0000
DV051	44.0000	25.0000	23.0000	11.0000	5.0000L	220.0000	40.0000L	14.0000
DV052	41.0000	19.0000	16.0000	8.0000	5.0000L	340.0000	40.0000L	14.0000
DV053	41.0000	14.0000	20.0000	6.0000	5.0000L	330.0000	40.0000L	17.0000
DV054	37.0000	34.0000	250.0000	14.0000	5.0000L	250.0000	40.0000L	13.0000
DV055	60.0000	27.0000	25.0000	11.0000	5.0000L	290.0000	40.0000L	21.0000
DV056	39.0000	17.0000	20.0000	7.0000	5.0000L	350.0000	40.0000L	15.0000
DV057	38.0000	14.0000	20.0000	6.0000	5.0000L	370.0000	40.0000L	15.0000
DV058	37.0000	16.0000	56.0000	7.0000	5.0000L	310.0000	40.0000L	13.0000
DV059	31.0000	14.0000	17.0000	6.0000	5.0000L	280.0000	40.0000L	12.0000

APPENDIX 1

FIELD_ID	ND_PPM_S	LI_PPM_S	PB_PPM_S	SC_PPM_S	SN_PPM_S	SR_PPM_S	TA_PPM_S	TH_PPM_S
DV060	36.0000	15.0000	16.0000	8.0000	5.0000L	260.0000	40.0000L	12.0000
DV061	39.0000	16.0000	15.0000	7.0000	5.0000L	530.0000	40.0000L	26.0000
DV062	57.0000	19.0000	14.0000	9.0000	5.0000L	530.0000	40.0000L	21.0000
DV063	46.0000	23.0000	19.0000	10.0000	5.0000L	380.0000	40.0000L	17.0000
DV064	44.0000	28.0000	16.0000	8.0000	5.0000L	460.0000	40.0000L	19.0000
DV065	54.0000	20.0000	17.0000	11.0000	5.0000L	560.0000	40.0000L	17.0000
DV066	57.0000	14.0000	16.0000	7.0000	5.0000L	560.0000	40.0000L	38.0000
DV067	69.0000	21.0000	18.0000	12.0000	5.0000L	660.0000	40.0000L	21.0000
DV068	58.0000	30.0000	42.0000	12.0000	5.0000L	580.0000	40.0000L	14.0000
DV069	110.0000	20.0000	8.0000	13.0000	5.0000L	590.0000	40.0000L	90.0000
DV070	38.0000	18.0000	15.0000	7.0000	5.0000L	390.0000	40.0000L	13.0000
DV071	31.0000	27.0000	15.0000	7.0000	5.0000L	360.0000	40.0000L	10.0000
DV072	48.0000	24.0000	17.0000	10.0000	5.0000L	560.0000	40.0000L	16.0000
DV073	37.0000	34.0000	21.0000	14.0000	5.0000L	290.0000	40.0000L	13.0000
DV074	34.0000	18.0000	23.0000	7.0000	5.0000L	390.0000	40.0000L	9.0000
DV075	50.0000	27.0000	74.0000	10.0000	5.0000L	360.0000	40.0000L	18.0000
DV076	45.0000	42.0000	18.0000	12.0000	5.0000L	450.0000	40.0000L	16.0000
DV077	35.0000	40.0000	18.0000	14.0000	5.0000L	400.0000	40.0000L	12.0000
DV078	30.0000	57.0000	8.0000	13.0000	5.0000L	320.0000	40.0000L	7.0000
DV079	33.0000	62.0000	11.0000	10.0000	5.0000L	180.0000	40.0000L	10.0000
DV080	41.0000	32.0000	19.0000	13.0000	5.0000L	220.0000	40.0000L	11.0000
DV081	39.0000	36.0000	30.0000	12.0000	5.0000L	300.0000	40.0000L	13.0000
DV082	40.0000	22.0000	29.0000	11.0000	5.0000L	350.0000	40.0000L	20.0000
DV083	39.0000	36.0000	25.0000	13.0000	5.0000L	270.0000	40.0000L	21.0000
DV084	45.0000	25.0000	33.0000	10.0000	5.0000L	250.0000	40.0000L	17.0000
DV085	43.0000	31.0000	30.0000	13.0000	5.0000L	300.0000	40.0000L	15.0000
DV086	41.0000	32.0000	26.0000	13.0000	5.0000L	320.0000	40.0000L	16.0000
DV087	46.0000	34.0000	25.0000	13.0000	5.0000L	310.0000	40.0000L	15.0000
DV088	45.0000	47.0000	20.0000	15.0000	5.0000L	250.0000	40.0000L	14.0000
DV089	46.0000	29.0000	27.0000	11.0000	5.0000L	210.0000	40.0000L	13.0000
DV090	42.0000	35.0000	27.0000	12.0000	5.0000L	250.0000	40.0000L	14.0000
DV091	44.0000	65.0000	17.0000	18.0000	5.0000L	260.0000	40.0000L	11.0000
DV092	39.0000	30.0000	16.0000	10.0000	5.0000L	410.0000	40.0000L	12.0000
DV093	41.0000	13.0000	17.0000	9.0000	5.0000L	360.0000	40.0000L	13.0000
DV094	39.0000	16.0000	18.0000	7.0000	5.0000L	290.0000	40.0000L	15.0000
DV095	37.0000	18.0000	22.0000	7.0000	5.0000L	330.0000	40.0000L	13.0000
DV096	40.0000	22.0000	15.0000	8.0000	5.0000L	240.0000	40.0000L	15.0000
DV097	29.0000	9.0000	16.0000	6.0000	5.0000L	390.0000	40.0000L	9.0000
DV098	31.0000	13.0000	18.0000	7.0000	5.0000L	640.0000	40.0000L	9.0000
DV099	34.0000	13.0000	28.0000	9.0000	5.0000L	470.0000	40.0000L	10.0000
DV100	42.0000	24.0000	43.0000	10.0000	5.0000L	510.0000	40.0000L	13.0000
DV101	32.0000	18.0000	26.0000	9.0000	5.0000L	590.0000	40.0000L	10.0000
DV102	32.0000	38.0000	19.0000	15.0000	5.0000L	1000.0000	40.0000L	7.0000
DV103	28.0000	8.0000	12.0000	5.0000	5.0000L	440.0000	40.0000L	8.0000
DV104	33.0000	47.0000	36.0000	12.0000	5.0000L	1500.0000	40.0000L	8.0000
DV105	28.0000	9.0000	15.0000	6.0000	5.0000L	680.0000	40.0000L	9.0000
DV106	30.0000	42.0000	16.0000	11.0000	5.0000L	1500.0000	40.0000L	17.0000
DV107	29.0000	12.0000	16.0000	6.0000	5.0000L	380.0000	40.0000L	8.0000
DV108	38.0000	18.0000	18.0000	9.0000	5.0000L	240.0000	40.0000L	13.0000
DV109	39.0000	26.0000	32.0000	11.0000	5.0000L	280.0000	40.0000L	15.0000
DV110	37.0000	26.0000	20.0000	10.0000	5.0000L	260.0000	40.0000L	15.0000
DV111	38.0000	22.0000	33.0000	11.0000	5.0000L	290.0000	40.0000L	14.0000
DV112	35.0000	18.0000	18.0000	9.0000	5.0000L	220.0000	40.0000L	12.0000
DV113	29.0000	17.0000	19.0000	9.0000	5.0000L	790.0000	40.0000L	10.0000
DV114	24.0000	30.0000	23.0000	12.0000	5.0000L	930.0000	40.0000L	8.0000
DV115	28.0000	28.0000	30.0000	11.0000	5.0000L	900.0000	40.0000L	8.0000
DV116	24.0000	50.0000	48.0000	13.0000	5.0000L	950.0000	40.0000L	8.0000
DV117	30.0000	18.0000	39.0000	9.0000	5.0000L	480.0000	40.0000L	9.0000
DV118	32.0000	14.0000	29.0000	7.0000	5.0000L	350.0000	40.0000L	14.0000

APPENDIX 1

FIELD_ID	ND_PPM_S	LI_PPM_S	PB_PPM_S	SC_PPM_S	SN_PPM_S	SR_PPM_S	TA_PPM_S	TH_PPM_S
DV119	35.0000	27.0000	31.0000	12.0000	5.0000L	350.0000	40.0000L	11.0000
DV120	28.0000	14.0000	43.0000	8.0000	5.0000L	390.0000	40.0000L	9.0000
DV121	30.0000	15.0000	32.0000	8.0000	5.0000L	340.0000	40.0000L	9.0000
DV122	31.0000	17.0000	48.0000	8.0000	5.0000L	450.0000	40.0000L	9.0000
DV123	34.0000	24.0000	39.0000	12.0000	5.0000L	490.0000	40.0000L	6.0000
DV124	61.0000	48.0000	39.0000	24.0000	5.0000L	560.0000	40.0000L	12.0000
DV125	42.0000	29.0000	16.0000	14.0000	5.0000L	420.0000	40.0000L	10.0000
DV126	47.0000	35.0000	21.0000	18.0000	5.0000L	460.0000	40.0000L	10.0000
DV127	45.0000	25.0000	46.0000	12.0000	5.0000L	350.0000	40.0000L	11.0000
DV128	44.0000	22.0000	130.0000	9.0000	5.0000L	400.0000	40.0000L	13.0000
DV129	49.0000	19.0000	21.0000	8.0000	5.0000L	420.0000	40.0000L	23.0000
DV130	42.0000	17.0000	36.0000	8.0000	5.0000L	550.0000	40.0000L	20.0000
DV131	49.0000	23.0000	32.0000	9.0000	5.0000L	590.0000	40.0000L	18.0000
DV132	60.0000	30.0000	41.0000	11.0000	5.0000L	730.0000	40.0000L	22.0000
DV133	38.0000	24.0000	47.0000	8.0000	5.0000L	200.0000	40.0000L	11.0000
DV134	37.0000	20.0000	18.0000	8.0000	5.0000L	230.0000	40.0000L	11.0000
DV135	43.0000	19.0000	15.0000	7.0000	5.0000L	250.0000	40.0000L	10.0000
DV136	35.0000	18.0000	20.0000	8.0000	5.0000L	210.0000	40.0000L	9.0000
DV137	58.0000	14.0000	23.0000	8.0000	5.0000L	300.0000	40.0000L	14.0000
DV138	55.0000	11.0000	20.0000	6.0000	5.0000L	300.0000	40.0000L	15.0000
DV139	40.0000	19.0000	17.0000	9.0000	5.0000L	340.0000	40.0000L	12.0000
DV140	38.0000	19.0000	14.0000	8.0000	5.0000L	270.0000	40.0000L	10.0000
DV141	36.0000	24.0000	15.0000	11.0000	5.0000L	340.0000	40.0000L	9.0000
DV142	51.0000	37.0000	21.0000	12.0000	5.0000L	850.0000	40.0000L	13.0000
DV143	43.0000	23.0000	19.0000	11.0000	5.0000L	540.0000	40.0000L	11.0000
DV144	49.0000	39.0000	26.0000	11.0000	5.0000L	1100.0000	40.0000L	15.0000
DV145	45.0000	24.0000	35.0000	10.0000	5.0000L	600.0000	40.0000L	13.0000
DV146	56.0000	19.0000	35.0000	9.0000	5.0000L	520.0000	40.0000L	19.0000
DV147	46.0000	22.0000	58.0000	8.0000	5.0000L	2300.0000	40.0000L	15.0000
DV148	51.0000	31.0000	44.0000	14.0000	5.0000L	460.0000	40.0000L	18.0000
DV149	40.0000	41.0000	30.0000	11.0000	5.0000L	480.0000	40.0000L	15.0000
DV150	36.0000	38.0000	32.0000	12.0000	5.0000L	520.0000	40.0000L	12.0000
DV151	66.0000	28.0000	46.0000	15.0000	5.0000L	420.0000	40.0000L	26.0000
DV152	40.0000	16.0000	66.0000	9.0000	5.0000L	410.0000	40.0000L	15.0000
DV153	31.0000	19.0000	25.0000	9.0000	5.0000L	520.0000	40.0000L	11.0000
DV154	39.0000	19.0000	29.0000	9.0000	5.0000L	440.0000	40.0000L	14.0000
DV155	65.0000	13.0000	32.0000	9.0000	5.0000L	380.0000	40.0000L	30.0000
DV156	60.0000	10.0000	21.0000	8.0000	5.0000L	480.0000	40.0000L	20.0000
DV157	62.0000	14.0000	21.0000	9.0000	5.0000L	490.0000	40.0000L	19.0000
DV158	65.0000	34.0000	90.0000	12.0000	5.0000L	800.0000	40.0000L	22.0000
DV159	42.0000	19.0000	30.0000	9.0000	5.0000L	2000.0000	40.0000L	17.0000
DV160	130.0000	12.0000	18.0000	9.0000	5.0000L	550.0000	40.0000L	64.0000
DV161	72.0000	16.0000	19.0000	10.0000	5.0000L	520.0000	40.0000L	31.0000
DV162	46.0000	13.0000	21.0000	9.0000	5.0000L	450.0000	40.0000L	18.0000
DV163	44.0000	11.0000	29.0000	11.0000	5.0000L	510.0000	40.0000L	14.0000
DV164	38.0000	14.0000	25.0000	8.0000	5.0000L	####	40.0000L	14.0000
DV165	38.0000	11.0000	22.0000	8.0000	5.0000L	2400.0000	40.0000L	13.0000
DV166	37.0000	11.0000	20.0000	8.0000	5.0000L	830.0000	40.0000L	17.0000
DV167	38.0000	10.0000	18.0000	8.0000	5.0000L	470.0000	40.0000L	10.0000
DV168	38.0000	12.0000	18.0000	8.0000	5.0000L	500.0000	40.0000L	11.0000
DV169	36.0000	14.0000	19.0000	8.0000	5.0000L	620.0000	40.0000L	15.0000
DV170	39.0000	14.0000	19.0000	8.0000	5.0000L	460.0000	40.0000L	11.0000
DV171	39.0000	12.0000	20.0000	8.0000	5.0000L	440.0000	40.0000L	14.0000
DV172	31.0000	16.0000	17.0000	9.0000	5.0000L	470.0000	40.0000L	9.0000
DV173	38.0000	16.0000	22.0000	8.0000	5.0000L	530.0000	40.0000L	10.0000
DV174	35.0000	18.0000	35.0000	8.0000	5.0000L	560.0000	40.0000L	9.0000
DV175	40.0000	17.0000	20.0000	9.0000	5.0000L	440.0000	40.0000L	11.0000

APPENDIX 1

FIELD_ID	U_PPM_S	V_PPM_S	Y_PPM_S	YB_PPM_S	ZN_PPM_S	AG_P_PPM	AS_P_PPM	AU_P_PPM
DV001	100.0000L	57.0000	16.0000	2.0000	55.0000	.0670L	8.2000	.1000L
DV002	100.0000L	72.0000	16.0000	2.0000	63.0000	.0670L	5.5000	.1000L
DV003	100.0000L	98.0000	18.0000	2.0000	74.0000	.0670L	8.9000	0.1300
DV004	100.0000L	77.0000	15.0000	1.0000	75.0000	.0670L	11.0000	.1000L
DV005	100.0000L	74.0000	18.0000	2.0000	78.0000	.0670L	7.8000	.1000L
DV006	100.0000L	47.0000	11.0000	1.0000	58.0000	.0670L	18.0000	0.1200
DV007	100.0000L	110.0000	19.0000	2.0000	69.0000	.0670L	7.2000	.1000L
DV008	100.0000L	95.0000	20.0000	2.0000	64.0000	.0670L	8.7000	.1000L
DV009	100.0000L	66.0000	19.0000	2.0000	70.0000	.0670L	19.0000	.1000L
DV010	100.0000L	110.0000	19.0000	2.0000	69.0000	.0670L	8.8000	.1000L
DV011	100.0000L	130.0000	20.0000	2.0000	56.0000	.0670L	6.6000	.1000L
DV012	100.0000L	99.0000	19.0000	2.0000	65.0000	.0670L	6.9000	.1000L
DV013	100.0000L	67.0000	15.0000	2.0000	58.0000	.0670L	7.4000	.1000L
DV014	100.0000L	50.0000	13.0000	1.0000	51.0000	.0670L	8.4000	0.1000
DV015	100.0000L	64.0000	15.0000	1.0000	58.0000	.0670L	6.4000	.1000L
DV016	100.0000L	52.0000	10.0000	1.0000	47.0000	.0670L	5.4000	.1000L
DV017	100.0000L	86.0000	16.0000	1.0000	61.0000	.0670L	13.0000	.1000L
DV018	100.0000L	58.0000	14.0000	1.0000	44.0000	.0670L	16.0000	.1000L
DV019	100.0000L	55.0000	14.0000	1.0000	53.0000	.0670L	21.0000	.1000L
DV020	100.0000L	56.0000	14.0000	1.0000	51.0000	.0670L	15.0000	.1000L
DV021	100.0000L	62.0000	14.0000	1.0000	61.0000	.0670L	6.7000	.1000L
DV022	100.0000L	95.0000	19.0000	2.0000	79.0000	0.1200	12.0000	.1000L
DV023	100.0000L	67.0000	15.0000	2.0000	65.0000	0.0700	11.0000	.1000L
DV024	100.0000L	110.0000	19.0000	2.0000	86.0000	0.1500	9.9000	.1000L
DV025	100.0000L	81.0000	18.0000	2.0000	76.0000	0.0850	9.2000	.1000L
DV026	100.0000L	81.0000	18.0000	2.0000	73.0000	.0670L	14.0000	.1000L
DV027	100.0000L	67.0000	17.0000	2.0000	63.0000	.0670L	6.7000	.1000L
DV028	100.0000L	100.0000	19.0000	2.0000	120.0000	.0670L	11.0000	.1000L
DV029	100.0000L	62.0000	13.0000	1.0000	62.0000	.0670L	6.4000	.1000L
DV030	100.0000L	100.0000	17.0000	2.0000	120.0000	.0670L	8.0000	.1000L
DV031	100.0000L	100.0000	25.0000	3.0000	63.0000	.0670L	5.7000	.1000L
DV032	100.0000L	130.0000	20.0000	2.0000	82.0000	.0670L	11.0000	.1000L
DV033	100.0000L	95.0000	22.0000	2.0000	84.0000	.0670L	7.6000	.1000L
DV034	100.0000L	99.0000	21.0000	2.0000	92.0000	.0670L	6.7000	.1000L
DV035	100.0000L	87.0000	19.0000	2.0000	82.0000	.0670L	5.3000	.1000L
DV036	100.0000L	76.0000	21.0000	2.0000	76.0000	.0670L	8.6000	.1000L
DV037	100.0000L	100.0000	17.0000	2.0000	69.0000	.0670L	7.9000	.1000L
DV038	100.0000L	80.0000	16.0000	2.0000	61.0000	.0670L	10.0000	.1000L
DV039	100.0000L	61.0000	19.0000	2.0000	59.0000	.0670L	3.6000	.1000L
DV040	100.0000L	80.0000	18.0000	2.0000	80.0000	.0670L	11.0000	.1000L
DV041	100.0000L	110.0000	19.0000	2.0000	85.0000	.0670L	10.0000	.1000L
DV042	100.0000L	58.0000	14.0000	2.0000	62.0000	.0670L	13.0000	.1000L
DV043	100.0000L	47.0000	13.0000	1.0000	46.0000	.0670L	18.0000	.1000L
DV044	100.0000L	50.0000	16.0000	2.0000	39.0000	.0670L	21.0000	.1000L
DV045	100.0000L	42.0000	11.0000	1.0000	44.0000	.0670L	24.0000	.1000L
DV046	100.0000L	45.0000	15.0000	2.0000	56.0000	.0670L	20.0000	.1000L
DV047	100.0000L	50.0000	14.0000	1.0000	44.0000	.0670L	9.6000	.1000L
DV048	100.0000L	57.0000	16.0000	1.0000	51.0000	.0670L	11.0000	.1000L
DV049	100.0000L	76.0000	18.0000	2.0000	46.0000	.0670L	8.7000	.1000L
DV050	100.0000L	79.0000	16.0000	2.0000	58.0000	.0670L	12.0000	.1000L
DV051	100.0000L	85.0000	15.0000	1.0000	72.0000	.0670L	14.0000	.1000L
DV052	100.0000L	93.0000	16.0000	1.0000	74.0000	.0670L	9.5000	.1000L
DV053	100.0000L	80.0000	18.0000	2.0000	75.0000	.0670L	15.0000	.1000L
DV054	100.0000L	98.0000	17.0000	2.0000	94.0000	0.6000	83.0000	0.3400
DV055	100.0000L	75.0000	16.0000	2.0000	59.0000	.0670L	11.0000	.1000L
DV056	100.0000L	61.0000	20.0000	2.0000	62.0000	.0670L	16.0000	.1000L
DV057	100.0000L	63.0000	20.0000	2.0000	71.0000	.0670L	20.0000	.1000L
DV058	100.0000L	87.0000	18.0000	2.0000	87.0000	.0670L	12.0000	.1000L
DV059	100.0000L	77.0000	18.0000	2.0000	66.0000	.0670L	10.0000	.1000L

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FIELD_ID	U_PPM_S	V_PPM_S	Y_PPM_S	YB_PPM_S	ZN_PPM_S	AG_P_PPM	AS_P_PPM	AU_P_PPM
DV060	100.0000L	57.0000	13.0000	1.0000	51.0000	.0670L	15.0000	.1000L
DV061	100.0000L	77.0000	17.0000	2.0000	62.0000	.0670L	11.0000	.1000L
DV062	100.0000L	160.0000	24.0000	2.0000	76.0000	.0670L	9.9000	.1000L
DV063	100.0000L	71.0000	13.0000	1.0000	72.0000	.0670L	13.0000	.1000L
DV064	100.0000L	120.0000	23.0000	2.0000	93.0000	.0670L	11.0000	.1000L
DV065	100.0000L	160.0000	26.0000	3.0000	95.0000	.0670L	9.5000	.1000L
DV066	100.0000L	130.0000	32.0000	3.0000	89.0000	.0670L	10.0000	.1000L
DV067	100.0000L	140.0000	41.0000	4.0000	140.0000	.0670L	12.0000	.1000L
DV068	100.0000L	180.0000	36.0000	4.0000	190.0000	.0670L	9.8000	.1000L
DV069	100.0000L	470.0000	51.0000	5.0000	120.0000	.0670L	4.9000	.1000L
DV070	100.0000L	100.0000	19.0000	2.0000	82.0000	.0670L	8.4000	.1000L
DV071	100.0000L	82.0000	17.0000	2.0000	100.0000	.0670L	9.5000	.1000L
DV072	100.0000L	190.0000	28.0000	3.0000	140.0000	.0670L	7.6000	.1000L
DV073	100.0000L	100.0000	13.0000	1.0000	90.0000	.0670L	46.0000	.1000L
DV074	100.0000L	75.0000	14.0000	1.0000	65.0000	.0670L	9.0000	.1000L
DV075	100.0000L	76.0000	16.0000	1.0000	110.0000	0.2500	22.0000	0.1100
DV076	100.0000L	110.0000	20.0000	2.0000	77.0000	.0670L	9.4000	.1000L
DV077	100.0000L	93.0000	16.0000	2.0000	85.0000	.0670L	15.0000	.1000L
DV078	100.0000L	94.0000	13.0000	1.0000	52.0000	.0670L	5.6000	.1000L
DV079	100.0000L	68.0000	9.0000	1.0000L	41.0000	.0670L	4.3000	.1000L
DV080	100.0000L	82.0000	14.0000	1.0000	120.0000	.0670L	40.0000	.1000L
DV081	100.0000L	83.0000	18.0000	2.0000	100.0000	0.1500	16.0000	.1000L
DV082	100.0000L	80.0000	20.0000	2.0000	95.0000	.0670L	21.0000	.1000L
DV083	100.0000L	86.0000	19.0000	2.0000	110.0000	0.1100	24.0000	.1000L
DV084	100.0000L	76.0000	20.0000	2.0000	110.0000	.0670L	41.0000	.1000L
DV085	100.0000L	88.0000	23.0000	2.0000	93.0000	0.0820	38.0000	.1000L
DV086	100.0000L	93.0000	23.0000	2.0000	81.0000	.0670L	47.0000	.1000L
DV087	100.0000L	94.0000	24.0000	2.0000	80.0000	.0670L	24.0000	.1000L
DV088	100.0000L	110.0000	28.0000	2.0000	88.0000	.0670L	8.9000	.1000L
DV089	100.0000L	63.0000	21.0000	2.0000	85.0000	0.0670	23.0000	.1000L
DV090	100.0000L	78.0000	20.0000	2.0000	92.0000	0.1400	81.0000	.1000L
DV091	100.0000L	150.0000	27.0000	2.0000	78.0000	.0670L	54.0000	.1000L
DV092	100.0000L	180.0000	17.0000	2.0000	80.0000	.0670L	9.4000	.1000L
DV093	100.0000L	68.0000	15.0000	1.0000	52.0000	.0670L	8.7000	.1000L
DV094	100.0000L	62.0000	13.0000	1.0000	48.0000	.0670L	11.0000	.1000L
DV095	100.0000L	70.0000	14.0000	1.0000	59.0000	.0670L	14.0000	.1000L
DV096	100.0000L	60.0000	9.0000	1.0000L	45.0000	.0670L	5.5000	.1000L
DV097	100.0000L	50.0000	12.0000	1.0000	36.0000	.0670L	14.0000	.1000L
DV098	100.0000L	58.0000	14.0000	1.0000	43.0000	.0670L	18.0000	.1000L
DV099	100.0000L	73.0000	18.0000	2.0000	84.0000	.0670L	4.9000	.1000L
DV100	100.0000L	140.0000	19.0000	2.0000	100.0000	.0670L	4.3000	.1000L
DV101	100.0000L	110.0000	18.0000	1.0000	110.0000	.0670L	6.6000	.1000L
DV102	100.0000L	140.0000	18.0000	2.0000	96.0000	.0670L	32.0000	.1000L
DV103	100.0000L	45.0000	12.0000	1.0000L	36.0000	.0670L	20.0000	.1000L
DV104	100.0000L	130.0000	17.0000	2.0000	120.0000	.0670L	64.0000	.1000L
DV105	100.0000L	46.0000	13.0000	1.0000	42.0000	.0670L	26.0000	.1000L
DV106	100.0000L	100.0000	16.0000	2.0000	75.0000	.0670L	68.0000	.1000L
DV107	100.0000L	48.0000	12.0000	1.0000	49.0000	.0670L	20.0000	.1000L
DV108	100.0000L	67.0000	15.0000	1.0000	56.0000	.0670L	9.3000	.1000L
DV109	100.0000L	73.0000	12.0000	1.0000	69.0000	.0670L	14.0000	.1000L
DV110	100.0000L	74.0000	10.0000	1.0000L	60.0000	.0670L	6.4000	.1000L
DV111	100.0000L	77.0000	19.0000	2.0000	75.0000	.0670L	16.0000	.1000L
DV112	100.0000L	63.0000	15.0000	2.0000	60.0000	.0670L	14.0000	.1000L
DV113	100.0000L	93.0000	16.0000	2.0000	69.0000	.0670L	40.0000	.1000L
DV114	100.0000L	110.0000	17.0000	2.0000	92.0000	.0670L	68.0000	.1000L
DV115	100.0000L	83.0000	16.0000	2.0000	110.0000	.0670L	42.0000	.1000L
DV116	100.0000L	95.0000	15.0000	1.0000	150.0000	.0670L	42.0000	.1000L
DV117	100.0000L	100.0000	16.0000	1.0000	140.0000	.0670L	17.0000	.1000L
DV118	100.0000L	62.0000	15.0000	1.0000	77.0000	.0670L	11.0000	.1000L

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FIELD_ID	U_PPM_S	V_PPM_S	Y_PPM_S	YB_PPM_S	ZN_PPM_S	AG_P_PPM	AS_P_PPM	AU_P_PPM
DV119	100.0000L	97.0000	18.0000	1.0000	84.0000	.0670L	6.9000	.1000L
DV120	100.0000L	75.0000	13.0000	1.0000	120.0000	.0670L	13.0000	.1000L
DV121	100.0000L	65.0000	15.0000	1.0000	110.0000	.0670L	27.0000	.1000L
DV122	100.0000L	77.0000	14.0000	1.0000	150.0000	.0670L	43.0000	.1000L
DV123	100.0000L	130.0000	19.0000	2.0000	150.0000	.0670L	13.0000	.1000L
DV124	100.0000L	240.0000	35.0000	3.0000	190.0000	.0670L	6.1000	.1000L
DV125	100.0000L	180.0000	22.0000	2.0000	79.0000	.0670L	5.1000	.1000L
DV126	100.0000L	190.0000	24.0000	2.0000	94.0000	.0670L	5.8000	.1000L
DV127	100.0000L	120.0000	22.0000	2.0000	140.0000	.0670L	7.0000	.1000L
DV128	100.0000L	72.0000	18.0000	2.0000	450.0000	.0670L	9.9000	.1000L
DV129	100.0000L	92.0000	21.0000	2.0000	72.0000	.0670L	4.1000	.1000L
DV130	100.0000L	88.0000	19.0000	2.0000	71.0000	.0670L	4.4000	.1000L
DV131	100.0000L	83.0000	21.0000	2.0000	86.0000	.0670L	5.1000	.1000L
DV132	100.0000L	120.0000	24.0000	2.0000	100.0000	.0670L	6.9000	.1000L
DV133	100.0000L	52.0000	11.0000	1.0000	110.0000	0.0930	28.0000	.1000L
DV134	100.0000L	58.0000	11.0000	1.0000	56.0000	.0670L	12.0000	.1000L
DV135	100.0000L	61.0000	18.0000	1.0000	49.0000	.0670L	13.0000	.1000L
DV136	100.0000L	63.0000	14.0000	1.0000	47.0000	.0670L	9.5000	.1000L
DV137	100.0000L	86.0000	22.0000	2.0000	68.0000	.0670L	7.7000	.1000L
DV138	100.0000L	62.0000	22.0000	2.0000	56.0000	.0670L	5.4000	.1000L
DV139	100.0000L	61.0000	16.0000	2.0000	59.0000	.0670L	12.0000	.1000L
DV140	100.0000L	65.0000	16.0000	2.0000	55.0000	.0670L	8.3000	.1000L
DV141	100.0000L	100.0000	18.0000	2.0000	72.0000	.0670L	13.0000	.1000L
DV142	100.0000L	89.0000	23.0000	2.0000	79.0000	.0670L	5.8000	.1000L
DV143	100.0000L	92.0000	25.0000	2.0000	63.0000	.0670L	19.0000	.1000L
DV144	100.0000L	120.0000	19.0000	2.0000	88.0000	.0670L	4.3000	.1000L
DV145	100.0000L	87.0000	21.0000	2.0000	84.0000	.0670L	6.2000	.1000L
DV146	100.0000L	99.0000	24.0000	2.0000	75.0000	.0670L	5.5000	.1000L
DV147	100.0000L	75.0000	20.0000	2.0000	150.0000	.0670L	7.4000	.1000L
DV148	100.0000L	130.0000	32.0000	3.0000	140.0000	.0670L	7.9000	.1000L
DV149	100.0000L	100.0000	20.0000	2.0000	86.0000	.0670L	7.0000	.1000L
DV150	100.0000L	100.0000	20.0000	2.0000	93.0000	.0670L	7.1000	.1000L
DV151	100.0000L	110.0000	50.0000	5.0000	190.0000	.0670L	15.0000	.1000L
DV152	100.0000L	62.0000	20.0000	2.0000	86.0000	.0670L	10.0000	.1000L
DV153	100.0000L	75.0000	18.0000	2.0000	70.0000	.0670L	8.2000	.1000L
DV154	100.0000L	65.0000	21.0000	2.0000	73.0000	.0670L	6.0000	.1000L
DV155	100.0000L	64.0000	35.0000	3.0000	59.0000	.0670L	4.5000	.1000L
DV156	100.0000L	53.0000	28.0000	2.0000	44.0000	.0670L	3.6000	.1000L
DV157	100.0000L	75.0000	28.0000	2.0000	56.0000	.0670L	4.8000	.1000L
DV158	100.0000L	130.0000	24.0000	2.0000	220.0000	.0670L	8.6000	.1000L
DV159	100.0000L	64.0000	21.0000	2.0000	87.0000	.0670L	9.0000	.1000L
DV160	100.0000L	90.0000	41.0000	3.0000	63.0000	.0670L	11.0000	.1000L
DV161	100.0000L	80.0000	30.0000	3.0000	82.0000	.0670L	5.7000	.1000L
DV162	100.0000L	56.0000	30.0000	3.0000	63.0000	.0670L	6.3000	.1000L
DV163	100.0000L	140.0000	25.0000	2.0000	76.0000	.0670L	6.6000	.1000L
DV164	100.0000L	100.0000	23.0000	2.0000	65.0000	.0670L	9.1000	.1000L
DV165	100.0000L	83.0000	24.0000	2.0000	58.0000	.0670L	8.6000	.1000L
DV166	100.0000L	75.0000	22.0000	2.0000	56.0000	.0670L	7.6000	.1000L
DV167	100.0000L	65.0000	20.0000	2.0000	42.0000	.0670L	4.0000	.1000L
DV168	100.0000L	71.0000	21.0000	2.0000	45.0000	.0670L	5.2000	.1000L
DV169	100.0000L	81.0000	19.0000	2.0000	64.0000	.0670L	5.7000	.1000L
DV170	100.0000L	79.0000	21.0000	2.0000	52.0000	.0670L	4.0000	.1000L
DV171	100.0000L	69.0000	20.0000	2.0000	45.0000	.0670L	3.7000	.1000L
DV172	100.0000L	71.0000	19.0000	2.0000	56.0000	.0670L	4.7000	.1000L
DV173	100.0000L	73.0000	20.0000	2.0000	63.0000	.0670L	4.1000	.1000L
DV174	100.0000L	65.0000	16.0000	1.0000	67.0000	.0670L	3.8000	.1000L
DV175	100.0000L	110.0000	21.0000	2.0000	66.0000	.0670L	4.5000	.1000L

APPENDIX 1

FIELD_ID	BI_P_PPM	CD_P_PPM	CU_P_PPM	MO_P_PPM	PB_P_PPM	SB_P_PPM	ZN_P_PPM	AU_AA_PPM
DV001	.6700L	0.1400	11.0000	0.8300	8.5000	1.2000	41.0000	.0020L
DV002	.6700L	0.1600	13.0000	1.0000	12.0000	1.2000	49.0000	.0020L
DV003	.6700L	0.1200	13.0000	1.2000	11.0000	1.6000	57.0000	.0020L
DV004	.6700L	0.3000	13.0000	1.1000	16.0000	3.8000	63.0000	.0020L
DV005	.6700L	0.2700	13.0000	1.0000	19.0000	2.0000	67.0000	.0020L
DV006	.6700L	0.1500	10.0000	0.8700	11.0000	5.0000	54.0000	.0020L
DV007	.6700L	0.1400	9.7000	0.7300	11.0000	1.1000	59.0000	.0020L
DV008	.6700L	0.1300	10.0000	0.4300	9.2000	1.6000	56.0000	.0020L
DV009	.6700L	0.1400	14.0000	0.4100	11.0000	1.3000	60.0000	.0020L
DV010	.6700L	0.1500	7.9000	0.5600	11.0000	1.1000	56.0000	.0020L
DV011	.6700L	0.2500	8.6000	0.5100	11.0000	1.3000	35.0000	.0020L
DV012	.6700L	0.2000	13.0000	0.9300	13.0000	1.2000	46.0000	.0020L
DV013	.6700L	0.1500	16.0000	1.3000	12.0000	1.6000	47.0000	.0020L
DV014	.6700L	0.1800	13.0000	1.5000	12.0000	1.5000	42.0000	.0020L
DV015	.6700L	0.1900	16.0000	2.0000	12.0000	1.6000	50.0000	.0020L
DV016	.6700L	0.2200	11.0000	1.7000	16.0000	1.3000	39.0000	.0020L
DV017	.6700L	0.1500	9.0000	0.7900	8.4000	3.5000	43.0000	.0020L
DV018	.6700L	0.1400	10.0000	1.5000	8.6000	10.0000	35.0000	.0020L
DV019	.6700L	0.1700	14.0000	1.0000	12.0000	2.8000	47.0000	.0020L
DV020	.6700L	0.1500	13.0000	0.9700	11.0000	1.6000	42.0000	.0020L
DV021	.6700L	0.2400	15.0000	1.5000	13.0000	1.4000	51.0000	.0020L
DV022	.6700L	0.3100	18.0000	2.8000	19.0000	1.8000	77.0000	.0020L
DV023	.6700L	0.2400	18.0000	1.5000	18.0000	1.4000	60.0000	.0020L
DV024	.6700L	0.3500	21.0000	2.8000	17.0000	1.4000	83.0000	.0020L
DV025	.6700L	0.2800	21.0000	1.7000	14.0000	1.4000	71.0000	0.0100
DV026	1.5000	0.2800	21.0000	1.1000	13.0000	1.1000	63.0000	.0020L
DV027	.6700L	0.2400	19.0000	1.1000	16.0000	1.0000	52.0000	.0020L
DV028	.6700L	0.3500	57.0000	2.5000	43.0000	1.4000	81.0000	.0020L
DV029	.6700L	0.3800	16.0000	0.7400	11.0000	0.9900	50.0000	.0020L
DV030	.6700L	0.3700	41.0000	1.3000	33.0000	1.9000	120.0000	.0020L
DV031	.6700L	0.1900	27.0000	1.0000	11.0000	0.9300	43.0000	.0020L
DV032	.6700L	0.2700	27.0000	1.6000	17.0000	1.3000	61.0000	.0020L
DV033	.6700L	0.1400	12.0000	1.3000	14.0000	1.0000	62.0000	.0020L
DV034	.6700L	0.1900	15.0000	1.4000	15.0000	1.2000	68.0000	.0020L
DV035	.6700L	0.1800	13.0000	1.0000	13.0000	1.2000	68.0000	.0020L
DV036	.6700L	0.1900	14.0000	0.7000	12.0000	1.5000	59.0000	.0020L
DV037	.6700L	0.1400	12.0000	0.8900	12.0000	1.4000	53.0000	.0020L
DV038	.6700L	0.1700	10.0000	0.9500	8.1000	3.4000	49.0000	.0020L
DV039	.6700L	0.1000	8.2000	0.6300	10.0000	0.6900	37.0000	.0020L
DV040	.6700L	0.2300	15.0000	1.7000	18.0000	1.3000	63.0000	.0020L
DV041	.6700L	0.5200	8.1000	1.7000	14.0000	1.7000	57.0000	.0020L
DV042	.6700L	0.3800	11.0000	1.8000	12.0000	1.5000	47.0000	.0020L
DV043	.6700L	0.1200	9.7000	0.9800	11.0000	1.2000	35.0000	.0020L
DV044	.6700L	0.0850	7.4000	0.8200	7.8000	1.4000	29.0000	.0020L
DV045	.6700L	0.1100	9.2000	1.1000	8.7000	2.9000	34.0000	.0020L
DV046	.6700L	0.1700	11.0000	1.9000	14.0000	2.0000	43.0000	.0020L
DV047	.6700L	0.1200	8.4000	1.1000	10.0000	.6700L	29.0000	.0020L
DV048	.6700L	0.0940	11.0000	1.4000	11.0000	.6700L	34.0000	.0020L
DV049	.6700L	0.1000	8.7000	1.1000	12.0000	.6700L	32.0000	0.0060
DV050	.6700L	0.0600	18.0000	0.8900	12.0000	.6700L	39.0000	.0020L
DV051	.6700L	0.1200	21.0000	0.8700	17.0000	0.8600	53.0000	.0020L
DV052	.6700L	0.1800	16.0000	0.8000	12.0000	.6700L	59.0000	.0020L
DV053	.6700L	0.1700	10.0000	2.0000	14.0000	.6700L	53.0000	.0020L
DV054	1.2000	0.4900	40.0000	1.2000	240.0000	.6700L	83.0000	0.3500
DV055	.6700L	0.1100	22.0000	1.1000	22.0000	.6700L	46.0000	0.0180
DV056	.6700L	0.1100	11.0000	2.0000	17.0000	1.4000	45.0000	.0020L
DV057	.6700L	0.2000	15.0000	6.3000	17.0000	1.0000	61.0000	.0020L
DV058	.6700L	0.2800	11.0000	1.8000	45.0000	0.9400	64.0000	.0020L
DV059	.6700L	0.2600	11.0000	2.1000	14.0000	0.7800	48.0000	.0020L

APPENDIX 1

FIELD_ID	BI_P_PPM	CD_P_PPM	CU_P_PPM	MO_P_PPM	PB_P_PPM	SB_P_PPM	ZN_P_PPM	AU_AA_PPM
DV060	.6700L	0.0900	16.0000	0.8400	13.0000	1.7000	39.0000	.0020L
DV061	.6700L	0.1700	17.0000	1.8000	8.9000	0.7100	42.0000	.0040
DV062	.6700L	0.1600	19.0000	2.2000	11.0000	.6700L	42.0000	.0020L
DV063	.6700L	0.1300	21.0000	1.1000	15.0000	.6700L	59.0000	.0020L
DV064	.6700L	0.7400	17.0000	3.0000	13.0000	0.8600	66.0000	.0020L
DV065	.6700L	0.2700	30.0000	1.6000	16.0000	.6700L	57.0000	.0020L
DV066	.6700L	0.4500	27.0000	1.2000	11.0000	.6700L	53.0000	.0020L
DV067	.6700L	0.4700	93.0000	1.6000	14.0000	.6700L	100.0000	.0020L
DV068	.6700L	1.0000	65.0000	3.3000	31.0000	.6700L	99.0000	.0020L
DV069	.6700L	0.0740	34.0000	1.9000	10.0000	.6700L	38.0000	.0020L
DV070	.6700L	0.8500	16.0000	2.5000	12.0000	.6700L	55.0000	.0020L
DV071	.6700L	1.3000	18.0000	4.1000	11.0000	1.2000	82.0000	.0020L
DV072	.6700L	1.1000	32.0000	4.3000	14.0000	1.5000	86.0000	.0020L
DV073	.6700L	0.2800	35.0000	1.7000	19.0000	1.8000	77.0000	.0040
DV074	.6700L	0.2000	17.0000	1.4000	20.0000	0.8000	47.0000	.0020L
DV075	.6700L	0.2900	27.0000	2.0000	78.0000	2.9000	81.0000	0.0360
DV076	.6700L	0.2400	23.0000	1.3000	16.0000	0.8800	55.0000	.0020L
DV077	.6700L	0.2000	30.0000	1.6000	14.0000	0.8300	70.0000	.0020L
DV078	.6700L	0.1100	24.0000	0.8900	12.0000	.6700L	41.0000	.0020L
DV079	.6700L	.0500L	27.0000	0.7500	9.6000	.6700L	28.0000	.0020L
DV080	0.7400	0.3600	36.0000	4.7000	18.0000	2.0000	110.0000	0.0020
DV081	1.8000	0.3100	30.0000	2.4000	24.0000	1.0000	89.0000	0.1000
DV082	.6700L	0.2900	26.0000	1.7000	23.0000	1.6000	77.0000	.0020L
DV083	.6700L	0.2700	36.0000	1.6000	19.0000	1.5000	91.0000	0.0040
DV084	.6700L	0.3400	26.0000	3.5000	29.0000	3.4000	91.0000	.0020L
DV085	.6700L	0.2700	31.0000	1.2000	24.0000	2.2000	77.0000	.0020L
DV086	.6700L	0.2400	33.0000	1.3000	24.0000	2.1000	68.0000	.0020L
DV087	.6700L	0.2500	36.0000	1.5000	19.0000	1.9000	68.0000	.0020L
DV088	.6700L	0.1200	41.0000	1.1000	15.0000	0.8700	73.0000	.0020L
DV089	.6700L	0.1800	24.0000	1.2000	23.0000	1.4000	75.0000	.0020L
DV090	.6700L	0.2900	30.0000	0.8500	28.0000	1.2000	79.0000	.0020L
DV091	.6700L	0.1700	67.0000	1.2000	15.0000	1.8000	64.0000	.0020L
DV092	.6700L	0.1300	12.0000	1.2000	12.0000	0.9200	58.0000	.0020L
DV093	.6700L	0.1100	17.0000	0.8300	11.0000	.6700L	38.0000	.0020L
DV094	.6700L	0.0860	15.0000	0.9300	14.0000	0.8400	35.0000	.0020L
DV095	.6700L	0.1200	18.0000	1.0000	16.0000	.6700L	46.0000	.0020L
DV096	.6700L	0.0770	17.0000	0.7900	8.2000	.6700L	30.0000	.0020L
DV097	.6700L	0.0980	8.8000	1.1000	9.8000	.6700L	27.0000	.0020L
DV098	.6700L	0.1100	12.0000	2.6000	11.0000	0.7800	32.0000	.0020L
DV099	.6700L	0.1300	16.0000	0.7800	20.0000	0.7300	55.0000	.0020L
DV100	.6700L	0.1600	17.0000	1.1000	31.0000	1.1000	63.0000	.0020L
DV101	.6700L	0.0880	15.0000	0.8000	19.0000	0.9300	70.0000	.0020L
DV102	.6700L	0.2400	23.0000	1.6000	17.0000	.6700L	79.0000	.0020L
DV103	.6700L	0.0950	8.4000	1.6000	8.9000	0.6800	31.0000	.0020L
DV104	.6700L	0.3600	26.0000	5.8000	28.0000	1.1000	110.0000	.0020L
DV105	.6700L	0.1200	9.9000	2.6000	9.9000	1.0000	42.0000	.0020L
DV106	.6700L	0.2400	21.0000	8.2000	14.0000	1.2000	58.0000	.0020L
DV107	.6700L	0.1500	11.0000	1.0000	16.0000	.6700L	41.0000	.0020L
DV108	.6700L	0.0780	15.0000	0.6900	14.0000	.6700L	39.0000	0.0080
DV109	.6700L	0.1200	23.0000	0.8300	25.0000	.6700L	54.0000	0.0040
DV110	.6700L	0.0740	15.0000	0.7900	9.6000	.6700L	35.0000	.0020L
DV111	.6700L	0.1500	23.0000	1.1000	25.0000	0.7400	59.0000	0.0040
DV112	.6700L	0.0970	16.0000	0.7400	17.0000	.6700L	45.0000	.0020L
DV113	.6700L	0.2100	17.0000	2.4000	17.0000	1.4000	52.0000	.0020L
DV114	.6700L	0.2000	25.0000	2.2000	21.0000	1.3000	75.0000	.0020L
DV115	.6700L	0.3000	20.0000	2.1000	28.0000	1.3000	97.0000	.0020L
DV116	.6700L	0.3400	26.0000	2.0000	46.0000	1.1000	120.0000	.0020L
DV117	.6700L	0.1100	14.0000	1.2000	32.0000	2.2000	94.0000	.0020L
DV118	.6700L	0.1900	23.0000	1.8000	28.0000	0.9500	63.0000	.0020L

APPENDIX 1

FIELD_ID	BI_P_PPM	CD_P_PPM	CU_P_PPM	MO_P_PPM	PB_P_PPM	SB_P_PPM	ZN_P_PPM	AU_AA_PPM
DV119	.6700L	0.1300	31.0000	2.0000	27.0000	1.4000	68.0000	.0020L
DV120	.6700L	0.2800	59.0000	2.3000	36.0000	2.0000	100.0000	.0020L
DV121	.6700L	0.1100	19.0000	3.0000	26.0000	3.9000	75.0000	.0020L
DV122	.6700L	0.1500	26.0000	1.5000	40.0000	3.4000	110.0000	.0020L
DV123	.6700L	0.2700	18.0000	2.0000	35.0000	1.4000	110.0000	.0020L
DV124	.6700L	0.1600	68.0000	1.3000	33.0000	.6700L	110.0000	.0020L
DV125	.6700L	0.1400	24.0000	3.1000	24.0000	0.9400	50.0000	.0020L
DV126	.6700L	0.1700	26.0000	1.0000	22.0000	.6700L	62.0000	.0020L
DV127	.6700L	0.2400	59.0000	1.5000	38.0000	.6700L	120.0000	.0020L
DV128	.6700L	0.9800	70.0000	8.6000	150.0000	.6700L	430.0000	.0020L
DV129	.6700L	0.0820	11.0000	1.1000	17.0000	.6700L	55.0000	.0020L
DV130	.6700L	0.1200	13.0000	0.9800	20.0000	.6700L	48.0000	.0020L
DV131	.6700L	0.1500	17.0000	1.4000	27.0000	.6700L	62.0000	.0020L
DV132	.6700L	0.1700	13.0000	1.0000	35.0000	.6700L	63.0000	.0020L
DV133	1.3000	0.5000	26.0000	1.9000	51.0000	3.2000	94.0000	.0020L
DV134	.6700L	0.1400	17.0000	0.6800	15.0000	0.8600	44.0000	.0020L
DV135	.6700L	0.0960	13.0000	0.6700	12.0000	0.8000	35.0000	.0020L
DV136	.6700L	0.1100	15.0000	0.9000	14.0000	.6700L	33.0000	.0020L
DV137	.6700L	0.1500	10.0000	0.9400	15.0000	.6700L	46.0000	.0020L
DV138	.6700L	0.0990	7.5000	0.6100	11.0000	.6700L	29.0000	.0020L
DV139	.6700L	0.1300	14.0000	0.7000	15.0000	0.6900	45.0000	.0020L
DV140	.6700L	0.0990	13.0000	0.6200	11.0000	.6700L	39.0000	.0020L
DV141	.6700L	0.1800	22.0000	0.7300	14.0000	1.0000	58.0000	.0020L
DV142	.6700L	0.1300	24.0000	0.8800	14.0000	.6700L	60.0000	.0020L
DV143	.6700L	0.1900	15.0000	0.4700	15.0000	1.6000	46.0000	.0020L
DV144	.6700L	0.1800	16.0000	0.6500	20.0000	.6700L	56.0000	.0020L
DV145	.6700L	0.1400	21.0000	1.0000	26.0000	.6700L	63.0000	0.0040
DV146	.6700L	0.1000	11.0000	0.9800	25.0000	.6700L	47.0000	.0020L
DV147	.6700L	0.2200	2.7000	1.4000	26.0000	.6700L	37.0000	.0020L
DV148	.6700L	0.1400	39.0000	1.4000	24.0000	1.1000	100.0000	.0020L
DV149	.6700L	0.1300	19.0000	0.9500	28.0000	0.8500	61.0000	.0020L
DV150	.6700L	0.1400	19.0000	0.9100	33.0000	.6700L	67.0000	.0020L
DV151	.6700L	0.2100	33.0000	1.7000	40.0000	2.0000	130.0000	.0020L
DV152	.6700L	0.1500	16.0000	1.1000	55.0000	1.0000	66.0000	.0020L
DV153	.6700L	0.0840	12.0000	0.7200	16.0000	1.1000	55.0000	.0020L
DV154	.6700L	0.1200	17.0000	0.7900	19.0000	.6700L	65.0000	.0020L
DV155	.6700L	0.0970	12.0000	1.1000	21.0000	.6700L	45.0000	.0020L
DV156	.6700L	0.0600	10.0000	0.7500	11.0000	.6700L	32.0000	.0020L
DV157	.6700L	0.0920	16.0000	0.9300	12.0000	.6700L	43.0000	.0020L
DV158	.6700L	0.3400	19.0000	1.3000	68.0000	.6700L	120.0000	.0020L
DV159	.6700L	0.2700	12.0000	2.2000	22.0000	.6700L	56.0000	.0020L
DV160	.6700L	0.1100	11.0000	0.9200	13.0000	.6700L	42.0000	.0020L
DV161	.6700L	0.1200	14.0000	0.7300	14.0000	1.0000	53.0000	.0020L
DV162	.6700L	0.1100	11.0000	0.8900	12.0000	0.6900	49.0000	.0020L
DV163	.6700L	0.1600	20.0000	2.0000	22.0000	0.7800	55.0000	.0020L
DV164	.6700L	0.1600	14.0000	2.0000	24.0000	0.6800	48.0000	.0020L
DV165	.6700L	0.1100	12.0000	1.7000	15.0000	1.1000	44.0000	.0020L
DV166	.6700L	0.0940	13.0000	1.6000	13.0000	.6700L	45.0000	.0020L
DV167	.6700L	0.0640	8.7000	0.7400	7.9000	.6700L	28.0000	.0020L
DV168	.6700L	0.0730	9.8000	0.8900	9.7000	.6700L	30.0000	.0020L
DV169	.6700L	0.0900	16.0000	0.6900	13.0000	.6700L	46.0000	.0020L
DV170	.6700L	0.0750	10.0000	0.7500	12.0000	.6700L	36.0000	.0020L
DV171	.6700L	.0500L	8.4000	0.6700	9.8000	.6700L	28.0000	.0020L
DV172	.6700L	0.0720	18.0000	0.7000	12.0000	1.2000	45.0000	.0020L
DV173	.6700L	0.1100	16.0000	0.7000	21.0000	.6700L	49.0000	.0020L
DV174	.6700L	0.2000	14.0000	0.6200	31.0000	0.8600	61.0000	.0020L
DV175	.6700L	0.0620	9.0000	0.7000	9.5000	.6700L	28.0000	.0020L

APPENDIX 2. BASIC STATISTICS

X₁: AL_%_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
6.417	.947	.072	.897	14.762	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	8.5	4.5	1123	7362.6	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	5.1	5.8	6.6	7.1	7.5
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
15	6.7	6.343	-.218	-.433	

X₂: CA_%_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
5.828	2.959	.224	8.753	50.765	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
1.5	19	17.5	1019.9	7467.01	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	2.9	3.5	5	7.575	9.9
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
16	•	5.183	1.971	1.248	

X₃: FE_%_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3.562	1.368	.103	1.87	38.391	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
1.7	15	13.3	623.4	2546.16	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
17	2.3	2.9	3.4	4.1	4.9
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
16	•	3.38	27.402	3.834	

APPENDIX 2. BASIC STATISTICS

X4: K_%_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
2.382	.489	.037	.24	20.543	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
1.3	4.5	3.2	416.9	1034.85	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	1.8	2.1	2.4	2.7	2.9
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
12	2.6	2.335	3.227	.966	

X5: MG_%_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
2.051	.908	.069	.824	44.268	174
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.77	5	4.23	356.85	874.441	1
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
11	1	1.3	1.8	2.6	3.61
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	•	1.868	.056	.865	

X6: NA_%_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
1.611	.525	.04	.275	32.573	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.6	3.4	2.8	281.95	502.182	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
17	.93	1.2	1.6	2	2.2
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	1.8	1.523	-.292	.299	

APPENDIX 2. BASIC STATISTICS

X₇: P_%_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
.106	.054	.004	.003	51.112	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.04	.46	.42	18.53	2.472	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
7	.06	.08	.1	.12	.14
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
16	.08	.098	20.467	3.848	

X₈: TI_%_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
.392	.161	.012	.026	41.024	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.16	1	.84	68.66	31.446	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	.23	.28	.36	.46	.57
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
15	.32	.366	3.606	1.676	

X₉: MN_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
783.086	331.449	25.055	109858.24	42.326	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
410	3500	3090	137040	126429400	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
15	500	562.5	720	880	1100
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	•	736.763	24.787	3.722	

APPENDIX 2. BASIC STATISTICS

X10: AG_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
•	•	•	•	•	0
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
•	•	•	•	•	175
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
•	•	•	•	•	•
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
•	•	•	•	•	

X11: AS_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
20.655	15.033	1.396	225.984	72.78	116
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
10	81	71	2396	75478	59
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
0	10	12	15	22	42
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
11	10	17.405	4.786	2.23	

X12: AU_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
•	•	•	•	•	0
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
•	•	•	•	•	175
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
•	•	•	•	•	•
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
•	•	•	•	•	

APPENDIX 2. BASIC STATISTICS

X13: BA_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
790.114	633.726	47.905	401609.182	80.207	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
340	5500	5160	138270	179129100	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	450	540	640	817.5	1100
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
12	620	696.099	32.849	5.338	

X14: BE_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
2.017	.53	.04	.281	26.294	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
1	7	6	353	761	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
13	2	2	2	2	2
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
12	2	1.963	43.793	4.654	

X15: BI_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
•	•	•	•	•	0
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
•	•	•	•	•	175
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
•	•	•	•	•	•
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
•	•	•	•	•	

APPENDIX 2. BASIC STATISTICS

X16: CD_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
2	•	•	•	•	1
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
2	2	0	2	4	174
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
0	•	•	2	•	•
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
0	2	2	•	•	

X17: CE_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
90.046	31.502	2.381	992.4	34.985	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
51	350	299	15758	1591618	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
17	61	73.25	86	99.75	120
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
14	110	86.218	26.255	3.807	

X18: CO_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
14.069	5.02	.379	25.202	35.684	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
7	38	31	2462	39022	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
15	9	11	13	17	20
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
16	12	13.305	3.286	1.421	

APPENDIX 2. BASIC STATISTICS

X19: CR_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
48.206	22.548	1.704	508.394	46.774	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
18	140	122	8436	495124	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
15	27	33	40	55	80
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	39	44.072	2.536	1.567	

X20: CU_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
22.886	14.251	1.077	203.09	62.27	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
9	100	91	4005	126995	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	12	14.25	19	26	37
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	19	20.135	8.851	2.683	

X21: EU_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
2.5	.707	.5	.5	28.284	2
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
2	3	1	5	13	173
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
0	•	•	2.5	•	•
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
0	•	2.449	-2	0	

APPENDIX 2. BASIC STATISTICS

X22: GA_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
16.32	2.644	.2	6.989	16.199	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
9	23	14	2856	47826	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
11	13	14.25	16	18	19
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
16	16	16.097	-0.005	-0.09	

X23: HO_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
•	•	•	•	•	0
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
•	•	•	•	•	175
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
•	•	•	•	•	•
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
•	•	•	•	•	

X24: LA_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
52.434	18.333	1.386	336.109	34.964	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
30	210	180	9176	539620	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	36	43	49	58.75	70
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	•	50.263	30.265	4.103	

APPENDIX 2. BASIC STATISTICS

X25: LI_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
46.491	44.318	3.35	1964.079	95.325	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
18	410	392	8136	720004	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
17	24	29.25	37	46.75	61
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	32	39.323	36.483	5.54	

X26: MO_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
3.333	1.506	.615	2.267	45.166	6
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
2	6	4	20	78	169
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
0	2	2	3	4	5.8
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
1	•	3.086	-.332	.927	

X27: NB_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
11.082	4.718	.361	22.264	42.578	171
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
4	40	36	1895	24785	4
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
12	6	9	10	13	17
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
15	9	10.277	8.68	2.137	

APPENDIX 2. BASIC STATISTICS

X28: ND_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
41.703	12.456	.942	155.141	29.867	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
24	130	106	7298	331342	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
13	30	35	39	45	56
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	39	40.361	17.873	3.263	

X29: NI_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
22.543	10.324	.78	106.583	45.797	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
8	65	57	3945	107477	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
12	12	15	19	27.75	36
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	19	20.605	2.412	1.437	

X30: PB_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
24.983	22.676	1.714	514.212	90.767	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
8	250	242	4372	198698	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
15	12	15	19	29	43
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
15	•	21.13	56.415	6.473	

APPENDIX 2. BASIC STATISTICS

X31: SC_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
9.274	2.726	.206	7.43	29.391	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
5	24	19	1623	16345	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
6	6	8	9	11	13
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
11	8	8.924	4.447	1.45	

X32: SN_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
•	•	•	•	•	0
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
•	•	•	•	•	175
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
•	•	•	•	•	•
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
•	•	•	•	•	

X33: SR_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
539.371	781.084	59.044	610092.131	144.814	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
180	10000	9820	94390	157067300	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
17	260	332.5	440	530	680
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	•	441.38	121.843	10.437	

APPENDIX 2. BASIC STATISTICS

X34: TA_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
•	•	•	•	•	0
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
•	•	•	•	•	175
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
•	•	•	•	•	•
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
•	•	•	•	•	

X35: TH_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
14.217	8.566	.648	73.378	60.252	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
6	90	84	2488	48140	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
14	9	10	13	15.75	20
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
15	13	12.998	40.032	5.448	

X36: U_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
•	•	•	•	•	0
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
•	•	•	•	•	175
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
•	•	•	•	•	•
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
•	•	•	•	•	

APPENDIX 2. BASIC STATISTICS

X37: V__PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
89.354	42.874	3.241	1838.196	47.982	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
42	470	428	15637	1717079	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
17	57	65	80	100	130
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
14	100	83.283	34.801	4.61	

X38: Y__PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
19.16	6.399	.484	40.951	33.399	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
9	51	42	3353	71369	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
12	13	15	18	21	25
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	19	18.315	6.676	2.08	

X39: YB_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
1.848	.678	.052	.459	36.666	171
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
1	5	4	316	662	4
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
0	1	1	2	2	2
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
14	2	1.732	4.91	1.331	

APPENDIX 2. BASIC STATISTICS

X40: ZN_PPM_S

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
80.754	41.801	3.16	1747.29	51.763	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
36	450	414	14132	1445248	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	47	58.25	72	88.75	120
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
14	56	74.523	34.15	4.594	

X41: AG_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
.16	.148	.043	.022	92.337	12
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.067	.6	.533	1.917	.546	163
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
1	.069	.084	.115	.15	.355
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
1	.15	.128	4.932	2.46	

X42: AS_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
14.211	13.834	1.046	191.38	97.348	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
3.6	83	79.4	2486.9	68641.07	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	4.9	6.7	9.5	15	27
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	11	10.775	8.689	2.821	

APPENDIX 2. BASIC STATISTICS

X43: AU_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
.16	.101	.045	.01	63.276	5
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.1	.34	.24	.8	.169	170
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
0	.1	.107	.12	.183	.34
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
0	•	.142	.19	1.454	

X44: BI_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
1.308	.392	.175	.153	29.936	5
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.74	1.8	1.06	6.54	9.168	170
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
0	.74	1.085	1.3	1.575	1.8
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
0	•	1.255	-.817	-.272	

X45: CD_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
.211	.179	.014	.032	84.796	173
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.06	1.3	1.24	36.475	13.188	2
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	.09	.11	.16	.242	.35
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
16	.11	.173	14.527	3.47	

APPENDIX 2. BASIC STATISTICS

X46: CU_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
19.863	13.127	.992	172.308	66.084	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
2.7	93	90.3	3476.1	99028.89	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
16	9.7	12	16	23	33
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
17	•	17.099	8.248	2.565	

X47: MO_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
1.501	1.156	.087	1.335	76.991	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.41	8.6	8.19	262.67	626.628	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
15	.7	.87	1.1	1.7	2.5
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
16	1.1	1.265	15.53	3.472	

X48: PB_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
20.532	22.144	1.674	490.373	107.853	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
7.8	240	232.2	3593.1	159098.37	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
17	9.9	12	15	22.75	33
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
15	•	16.918	60.017	6.965	

APPENDIX 2. BASIC STATISTICS

X49: SB_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
1.541	1.114	.104	1.242	72.315	114
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.68	10	9.32	175.66	410.976	61
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
11	.798	.99	1.3	1.6	2.81
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
11	1.4	1.345	28.263	4.48	

X50: ZN_P_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
60.566	35.715	2.7	1275.534	58.968	175
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
27	430	403	10599	863879	0
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
17	35	43	55	68	94
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
16	63	55.404	63.688	6.565	

X51: AU_AA_PPM

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
.04	.093	.025	.009	235.081	14
Minimum:	Maximum:	Range:	Sum:	Sum of Sqr.:	# Missing:
.002	.35	.348	.554	.134	161
# < 10th %:	10th %:	25th %:	50th %:	75th %:	90th %:
1	.004	.004	.005	.018	.125
# > 90th %:	Mode:	Geo. Mean:	Kurtosis:	Skewness:	
1	.004	.01	7.304	2.946	

APPENDIX 3
Interelement Correlation Matrix

Element	AL_%_S	CA_%_S	FE_%_S	K_%_S	MG_%_S	NA_%_S
AL_%_S	1.000					
CA_%_S	-0.695	1.000				
FE_%_S	0.328	-0.215	1.000			
K_%_S	0.560	-0.655	-0.041	1.000		
MG_%_S	-0.606	0.764	-0.183	-0.610	1.000	
NA_%_S	0.620	-0.341	0.216	0.340	-0.382	1.000
P_%_S	0.241	0.031	0.699	-0.163	-0.013	0.259
TI_%_S	0.477	-0.279	0.732	0.068	-0.232	0.451
MN_PPM_S	0.468	-0.313	0.585	0.303	-0.304	0.386
AS_PPM_S	0.029	0.128	0.010	0.172	0.127	-0.245
BA_PPM_S	0.332	-0.323	0.107	0.519	-0.325	0.329
BE_PPM_S	0.365	-0.245	0.129	0.229	-0.245	0.103
CE_PPM_S	0.305	-0.383	0.474	0.056	-0.397	0.313
CO_PPM_S	0.420	-0.205	0.725	-0.013	-0.024	0.109
CR_PPM_S	0.297	-0.115	0.428	-0.133	0.067	0.019
CU_PPM_S	0.288	-0.024	0.498	-0.031	0.091	0.057
GA_PPM_S	0.890	-0.614	0.548	0.459	-0.516	0.470
LA_PPM_S	0.338	-0.375	0.445	0.073	-0.391	0.361
LI_PPM_S	0.108	0.145	-0.002	0.080	0.036	0.049
MO_PPM_S	-0.018	0.180	-0.013	-0.060	0.080	0.018
NB_PPM_S	0.430	-0.326	0.498	0.102	-0.343	0.393
ND_PPM_S	0.238	-0.236	0.602	-0.096	-0.283	0.249
NI_PPM_S	0.299	-0.077	0.379	-0.142	0.122	-0.099
PB_PPM_S	0.248	-0.192	0.138	0.177	-0.147	0.087
SC_PPM_S	0.543	-0.302	0.663	0.043	-0.115	0.135
SR_PPM_S	0.154	-0.015	0.036	0.060	-0.151	0.233
TH_PPM_S	0.138	-0.166	0.593	-0.053	-0.267	0.157
V_PPM_S	0.231	-0.039	0.934	-0.138	-0.106	0.240
Y_PPM_S	0.390	-0.256	0.656	0.045	-0.335	0.367
YB_PPM_S	0.354	-0.154	0.567	-0.005	-0.261	0.323
ZN_PPM_S	0.353	-0.058	0.394	0.142	0.010	0.217
AG_P_PPM	0.074	-0.050	0.054	-0.072	-0.055	-0.170
AS_P_PPM	0.007	0.145	0.016	0.124	0.132	-0.253
AU_P_PPM	-0.033	-0.004	0.030	-0.099	0.016	-0.114
BI_P_PPM	0.024	0.078	0.021	-0.027	-0.001	-0.151
CD_P_PPM	-0.058	0.324	0.077	-0.231	0.193	-0.081
CU_P_PPM	0.267	-0.038	0.477	-0.020	0.093	0.025
MO_P_PPM	0.018	0.234	0.055	-0.034	0.157	0.024
PB_P_PPM	0.183	-0.104	0.136	0.104	-0.045	0.029
SB_P_PPM	-0.186	0.276	-0.151	-0.034	0.346	-0.151
ZN_P_PPM	0.268	0.013	0.205	0.114	0.118	0.109
AU_AA_PPM	0.057	-0.065	0.058	-0.023	-0.074	-0.109

APPENDIX 3
Interelement Correlation Matrix

Element	P_%_S	TI_%_S	MN_PPM_S	AS_PPM_S	BA_PPM_S	BE_PPM_S
AL_%_S						
CA_%_S						
FE_%_S						
K_%_S						
MG_%_S						
NA_%_S						
P_%_S	1.000					
TI_%_S	0.579	1.000				
MN_PPM_S	0.517	0.701	1.000			
AS_PPM_S	-0.120	-0.083	0.052	1.000		
BA_PPM_S	0.099	0.256	0.653	0.039	1.000	
BE_PPM_S	0.171	0.054	0.117	0.033	0.008	1.000
CE_PPM_S	0.392	0.404	0.460	-0.280	0.087	0.171
CO_PPM_S	0.434	0.619	0.470	0.266	0.071	0.090
CR_PPM_S	0.179	0.445	0.225	0.153	-0.075	-0.019
CU_PPM_S	0.564	0.346	0.409	0.244	0.187	0.169
GA_PPM_S	0.396	0.602	0.652	0.080	0.383	0.410
LA_PPM_S	0.375	0.413	0.471	-0.271	0.108	0.169
LI_PPM_S	-0.027	0.041	0.064	0.569	-0.036	-0.004
MO_PPM_S	-0.005	-0.022	-0.020	0.352	-0.037	0.017
NB_PPM_S	0.450	0.573	0.498	-0.174	0.080	0.255
ND_PPM_S	0.574	0.480	0.495	-0.246	0.028	0.167
NI_PPM_S	0.190	0.357	0.215	0.312	-0.057	0.033
PB_PPM_S	0.022	0.157	0.264	0.328	0.209	0.073
SC_PPM_S	0.410	0.633	0.506	0.264	0.096	0.096
SR_PPM_S	0.064	0.089	0.179	-0.022	0.057	0.008
TH_PPM_S	0.518	0.334	0.384	-0.135	0.015	0.152
V_PPM_S	0.722	0.715	0.474	-0.026	0.007	0.072
Y_PPM_S	0.734	0.662	0.701	-0.143	0.223	0.209
YB_PPM_S	0.689	0.605	0.580	-0.076	0.149	0.272
ZN_PPM_S	0.409	0.420	0.550	0.162	0.321	0.163
AG_P_PPM	-0.045	-0.059	-0.053	0.399	-0.079	0.157
AS_P_PPM	-0.129	-0.087	0.018	0.977	-0.010	0.022
AU_P_PPM	-0.035	-0.031	-0.051	0.321	-0.059	-0.036
BI_P_PPM	-0.069	-0.092	-0.062	0.194	-0.073	0.515
CD_P_PPM	0.261	0.010	0.070	0.174	-0.065	0.233
CU_P_PPM	0.528	0.307	0.375	0.262	0.174	0.184
MO_P_PPM	0.115	-0.038	0.087	0.365	0.067	0.129
PB_P_PPM	0.026	0.106	0.207	0.354	0.158	0.054
SB_P_PPM	-0.072	-0.154	-0.030	0.258	0.129	0.011
ZN_P_PPM	0.237	0.217	0.352	0.229	0.263	0.142
AU_AA_PPM	-0.052	-0.018	-0.036	0.343	-0.049	0.193

APPENDIX 3
Interelement Correlation Matrix

Element	CE_PPM_S	CO_PPM_S	CR_PPM_S	CU_PPM_S	GA_PPM_S	LA_PPM_S
AL_%_S						
CA_%_S						
FE_%_S						
K_%_S						
MG_%_S						
NA_%_S						
P_%_S						
TI_%_S						
MN_PPM_S						
AS_PPM_S						
BA_PPM_S						
BE_PPM_S						
CE_PPM_S	1.000					
CO_PPM_S	0.085	1.000				
CR_PPM_S	-0.022	0.744	1.000			
CU_PPM_S	0.053	0.645	0.361	1.000		
GA_PPM_S	0.424	0.558	0.299	0.423	1.000	
LA_PPM_S	0.992	0.068	-0.015	0.049	0.439	1.000
Li_PPM_S	-0.165	0.192	0.180	0.085	0.107	-0.148
MO_PPM_S	-0.131	0.085	0.138	0.073	-0.024	-0.118
NB_PPM_S	0.770	0.151	0.071	0.123	0.550	0.788
ND_PPM_S	0.952	0.205	0.047	0.196	0.413	0.935
NI_PPM_S	-0.082	0.771	0.926	0.444	0.330	-0.080
PB_PPM_S	0.039	0.198	0.097	0.351	0.279	0.053
SC_PPM_S	0.152	0.906	0.725	0.622	0.641	0.143
SR_PPM_S	0.005	0.012	-0.005	-0.039	0.107	0.022
TH_PPM_S	0.777	0.130	-0.065	0.088	0.322	0.748
V_PPM_S	0.353	0.623	0.412	0.430	0.418	0.332
Y_PPM_S	0.689	0.338	0.097	0.378	0.550	0.678
YB_PPM_S	0.533	0.260	0.096	0.341	0.495	0.525
ZN_PPM_S	0.126	0.426	0.243	0.664	0.475	0.143
AG_P_PPM	-0.049	0.103	0.082	0.134	0.085	-0.047
AS_P_PPM	-0.272	0.275	0.172	0.227	0.051	-0.267
AU_P_PPM	-0.045	0.039	0.018	0.073	-0.028	-0.043
BI_P_PPM	-0.059	0.066	0.021	0.102	0.052	-0.058
CD_P_PPM	-0.104	0.072	0.096	0.413	0.001	-0.081
CU_P_PPM	0.043	0.632	0.350	0.987	0.404	0.035
MO_P_PPM	-0.152	0.118	0.073	0.330	0.065	-0.138
PB_P_PPM	-0.006	0.207	0.104	0.384	0.217	0.006
SB_P_PPM	-0.226	-0.061	-0.034	-0.044	-0.152	-0.203
ZN_P_PPM	-0.010	0.343	0.207	0.622	0.340	0.009
AU_AA_PPM	-0.037	0.080	0.038	0.117	0.071	-0.035

APPENDIX 3
Interelement Correlation Matrix

Element	LI_PPM_S	MO_PPM_S	NB_PPM_S	ND_PPM_S	NI_PPM_S	PB_PPM_S
AL_%_S						
CA_%_S						
FE_%_S						
K_%_S						
MG_%_S						
NA_%_S						
P_%_S						
TI_%_S						
MN_PPM_S						
AS_PPM_S						
BA_PPM_S						
BE_PPM_S						
CE_PPM_S						
CO_PPM_S						
CR_PPM_S						
CU_PPM_S						
GA_PPM_S						
LA_PPM_S						
LI_PPM_S	1.000					
MO_PPM_S	0.733	1.000				
NB_PPM_S	-0.049	-0.122	1.000			
ND_PPM_S	-0.148	-0.091	0.758	1.000		
NI_PPM_S	0.275	0.201	0.015	0.007	1.000	
PB_PPM_S	0.025	-0.016	0.031	0.042	0.142	1.000
SC_PPM_S	0.176	0.052	0.219	0.259	0.751	0.249
SR_PPM_S	0.181	0.099	0.071	0.000	-0.032	0.021
TH_PPM_S	-0.040	-0.020	0.657	0.827	-0.067	-0.006
V_PPM_S	0.060	0.052	0.461	0.504	0.330	0.048
Y_PPM_S	-0.058	-0.024	0.684	0.784	0.069	0.066
YB_PPM_S	0.040	0.059	0.620	0.632	0.074	0.080
ZN_PPM_S	0.113	0.071	0.214	0.193	0.282	0.535
AG_P_PPM	-0.004	-0.029	-0.077	-0.025	0.184	0.705
AS_P_PPM	0.576	0.370	-0.198	-0.230	0.325	0.326
AU_P_PPM	-0.035	-0.021	-0.074	-0.034	0.087	0.695
BI_P_PPM	-0.022	0.000	-0.101	-0.034	0.099	0.298
CD_P_PPM	0.087	0.241	0.016	-0.001	0.157	0.267
CU_P_PPM	0.073	0.063	0.102	0.180	0.439	0.335
MO_P_PPM	0.560	0.663	-0.084	-0.099	0.155	0.194
PB_P_PPM	0.030	-0.015	-0.019	0.009	0.168	0.970
SB_P_PPM	-0.019	0.005	-0.208	-0.238	0.017	-0.078
ZN_P_PPM	0.144	0.087	0.046	0.031	0.271	0.515
AU_AA_PPM	-0.013	-0.018	-0.049	-0.023	0.114	0.742

APPENDIX 3
Interelement Correlation Matrix

Element	SC_PPM_S	SR_PPM_S	TH_PPM_S	V__PPM_S	Y__PPM_S	YB_PPM_S
AL_%_S						
CA_%_S						
FE_%_S						
K_%_S						
MG_%_S						
NA_%_S						
P_%_S						
TI_%_S						
MN_PPM_S						
AS_PPM_S						
BA_PPM_S						
BE_PPM_S						
CE_PPM_S						
CO_PPM_S						
CR_PPM_S						
CU_PPM_S						
GA_PPM_S						
LA_PPM_S						
LI_PPM_S						
MO_PPM_S						
NB_PPM_S						
ND_PPM_S						
NI_PPM_S						
PB_PPM_S						
SC_PPM_S	1.000					
SR_PPM_S	-0.009	1.000				
TH_PPM_S	0.114	0.022	1.000			
V__PPM_S	0.557	0.074	0.535	1.000		
Y__PPM_S	0.431	0.107	0.657	0.610	1.000	
YB_PPM_S	0.363	0.093	0.557	0.573	0.873	1.000
ZN_PPM_S	0.412	0.031	0.101	0.350	0.318	0.324
AG_P_PPM	0.188	-0.057	-0.006	-0.006	-0.045	0.000
AS_P_PPM	0.275	0.005	-0.131	-0.028	-0.141	-0.091
AU_P_PPM	0.099	-0.037	-0.034	-0.014	-0.067	-0.027
BI_P_PPM	0.083	-0.047	-0.038	-0.039	-0.077	-0.022
CD_P_PPM	0.062	-0.009	-0.034	0.181	0.115	0.225
CU_P_PPM	0.618	-0.066	0.067	0.399	0.355	0.315
MO_P_PPM	0.080	0.110	-0.014	0.135	0.018	0.097
PB_P_PPM	0.252	0.004	-0.023	0.054	0.025	0.049
SB_P_PPM	-0.125	-0.068	-0.210	-0.152	-0.207	-0.210
ZN_P_PPM	0.333	-0.015	-0.036	0.151	0.139	0.174
AU_AA_PPM	0.153	-0.038	-0.007	0.006	-0.037	0.015

APPENDIX 3
Interelement Correlation Matrix

Element	ZN_PPM_S	AG_P_PPM	AS_P_PPM	AU_P_PPM	BI_P_PPM	CD_P_PPM
AL_%_S						
CA_%_S						
FE_%_S						
K_%_S						
MG_%_S						
NA_%_S						
P_%_S						
TI_%_S						
MN_PPM_S						
AS_PPM_S						
BA_PPM_S						
BE_PPM_S						
CE_PPM_S						
CO_PPM_S						
CR_PPM_S						
CU_PPM_S						
GA_PPM_S						
LA_PPM_S						
LI_PPM_S						
MO_PPM_S						
NB_PPM_S						
ND_PPM_S						
NI_PPM_S						
PB_PPM_S						
SC_PPM_S						
SR_PPM_S						
TH_PPM_S						
V__PPM_S						
Y__PPM_S						
YB_PPM_S						
ZN_PPM_S	1.000					
AG_P_PPM	0.061	1.000				
AS_P_PPM	0.121	0.424	1.000			
AU_P_PPM	0.011	0.841	0.346	1.000		
BI_P_PPM	0.059	0.459	0.204	0.325	1.000	
CD_P_PPM	0.536	0.166	0.150	0.099	0.151	1.000
CU_P_PPM	0.617	0.157	0.248	0.086	0.116	0.403
MO_P_PPM	0.515	0.027	0.347	-0.026	0.064	0.555
PB_P_PPM	0.560	0.733	0.361	0.707	0.321	0.318
SB_P_PPM	-0.004	0.031	0.249	0.046	0.046	0.066
ZN_P_PPM	0.927	0.108	0.202	0.041	0.108	0.527
AU_AA_PPM	0.034	0.904	0.369	0.887	0.521	0.127

APPENDIX 3
Interelement Correlation Matrix

Element	CU_P_PPM	MO_P_PPM	PB_P_PPM	SB_P_PPM	ZN_P_PPM	AU_AA_PPM
AL_%_S						
CA_%_S						
FE_%_S						
K_%_S						
MG_%_S						
NA_%_S						
P_%_S						
TI_%_S						
MN_PPM_S						
AS_PPM_S						
BA_PPM_S						
BE_PPM_S						
CE_PPM_S						
CO_PPM_S						
CR_PPM_S						
CU_PPM_S						
GA_PPM_S						
LA_PPM_S						
LI_PPM_S						
MO_PPM_S						
NB_PPM_S						
ND_PPM_S						
NI_PPM_S						
PB_PPM_S						
SC_PPM_S						
SR_PPM_S						
TH_PPM_S						
V_PPM_S						
Y_PPM_S						
YB_PPM_S						
ZN_PPM_S						
AG_P_PPM	1.000					
AS_P_PPM	0.325	1.000				
AU_P_PPM	0.376	0.263	1.000			
BI_P_PPM	-0.027	0.091	-0.029	1.000		
CD_P_PPM	0.600	0.568	0.585	0.066	1.000	
CU_P_PPM	0.133	-0.002	0.744	-0.049	0.065	1.000

APPENDIX 4
PROPORTIONAL SYMBOL PLOTS FOR EACH ELEMENT

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
117°45'W

Proportional Symbol Plot - Ag PICP

+



+

35°30'N
116°15'W

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Al ICP

+



+

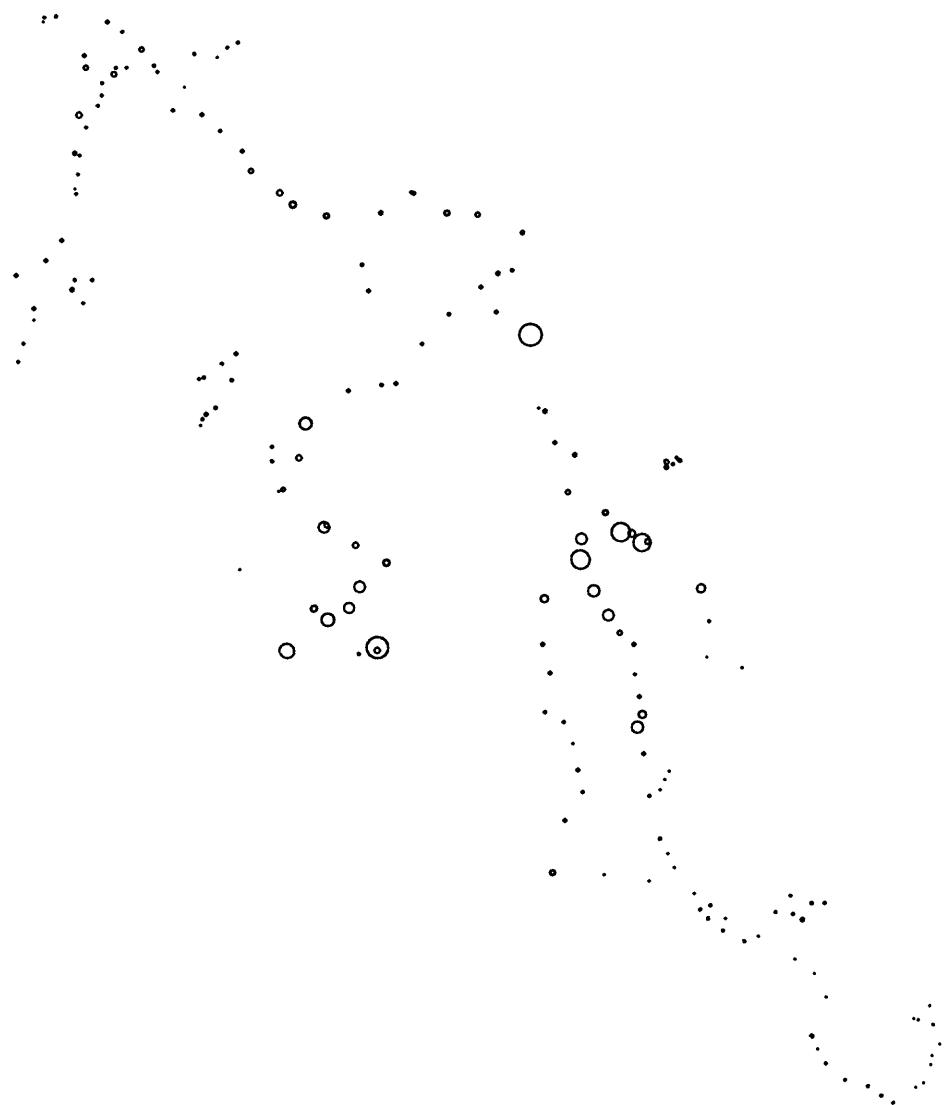
35°30'N
+ 116°15'W

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - As PICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Au PICP

+



+

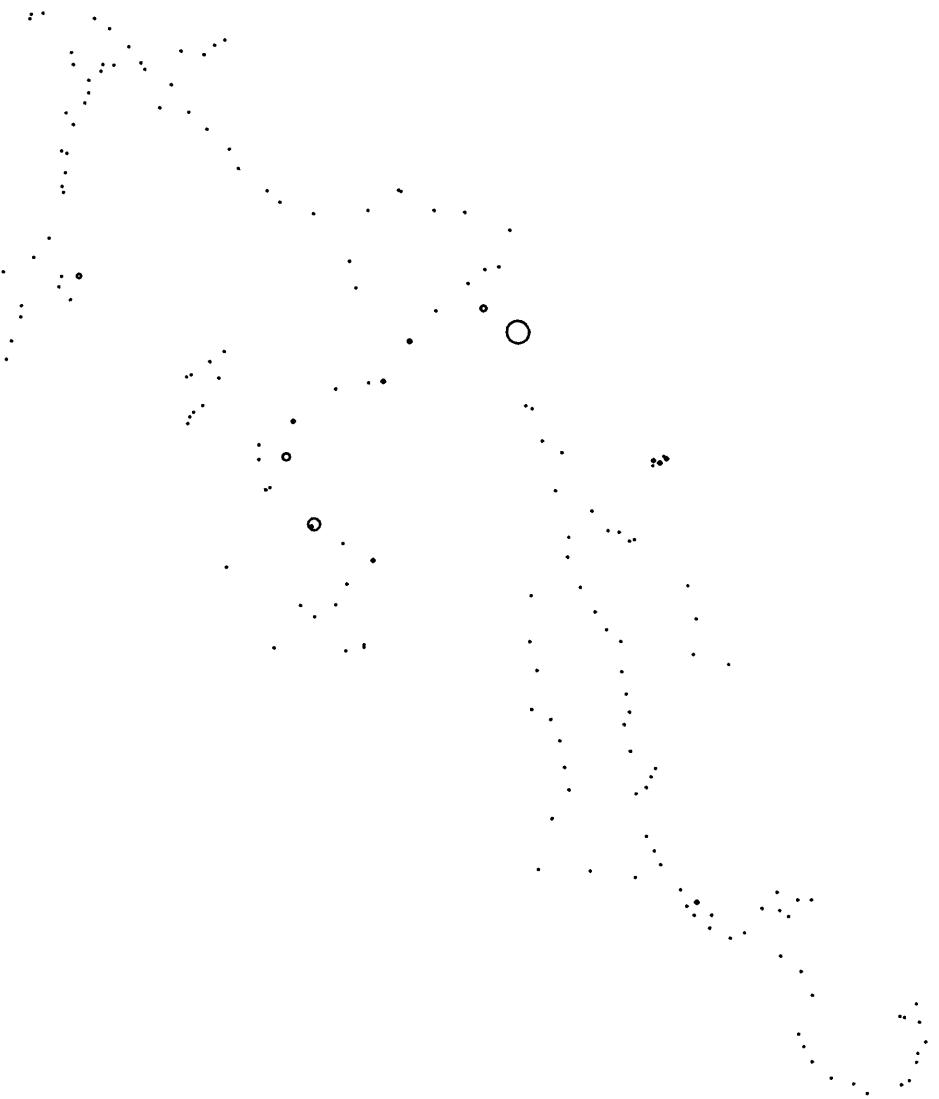
35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Au AA

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Ba ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
117°45'W +

Proportional Symbol Plot - Be ICP +



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Bi PICP +



+

35°30'N
+ 116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Ca ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Cd PICP

+



+

35°30'N
+ 116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Co ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Cr ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Cu ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Cu PICP

+



+

35°30'N
+ 116°15'W

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Fe ICP

+



+

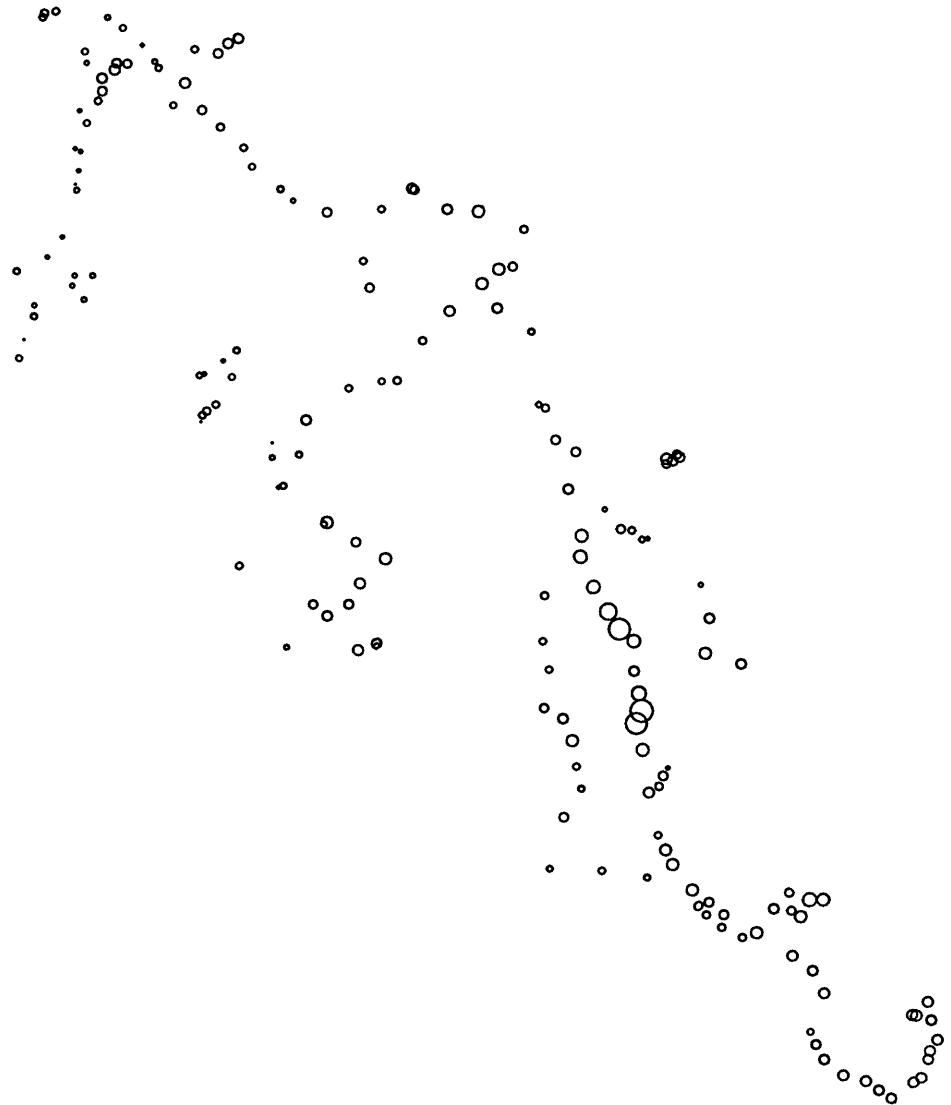
35°30'N
+ 116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - K ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

Proportional Symbol Plot - Li ICP

+ 37°20'N
+ 117°45'W

+

+

35°30'N
+ 116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Mg ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Mn ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Mo ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Mo PICP

+



+

35°30'N
+ 116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Na ICP

+



+

35°30'N
116°15'W

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Ni ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - P ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
117°45'W

Proportional Symbol Plot - Pb ICP

+



+

35°30'N
116°15'W

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
117°45'W

Proportional Symbol Plot - Pb PICP

+



+

35°30'N
116°15'W

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Sb PICP +



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

Proportional Symbol Plot - Th ICP

+ 37°20'N
+ 117°45'W

+



+

35°30'N
116°15'W

+

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Ti ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - V ICP



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Zn ICP

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Zn PICP

+



+

35°30'N
116°15'W +

APPENDIX 5
PROPORTIONAL SYMBOL PLOTS FOR EACH FACTOR

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Factor 1 +



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Factor 2 +



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Factor 3

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Factor 4 +



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

Proportional Symbol Plot - Factor 5

+ 37°20'N
+ 117°45'W

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Factor 6 +



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Factor 7 +



+

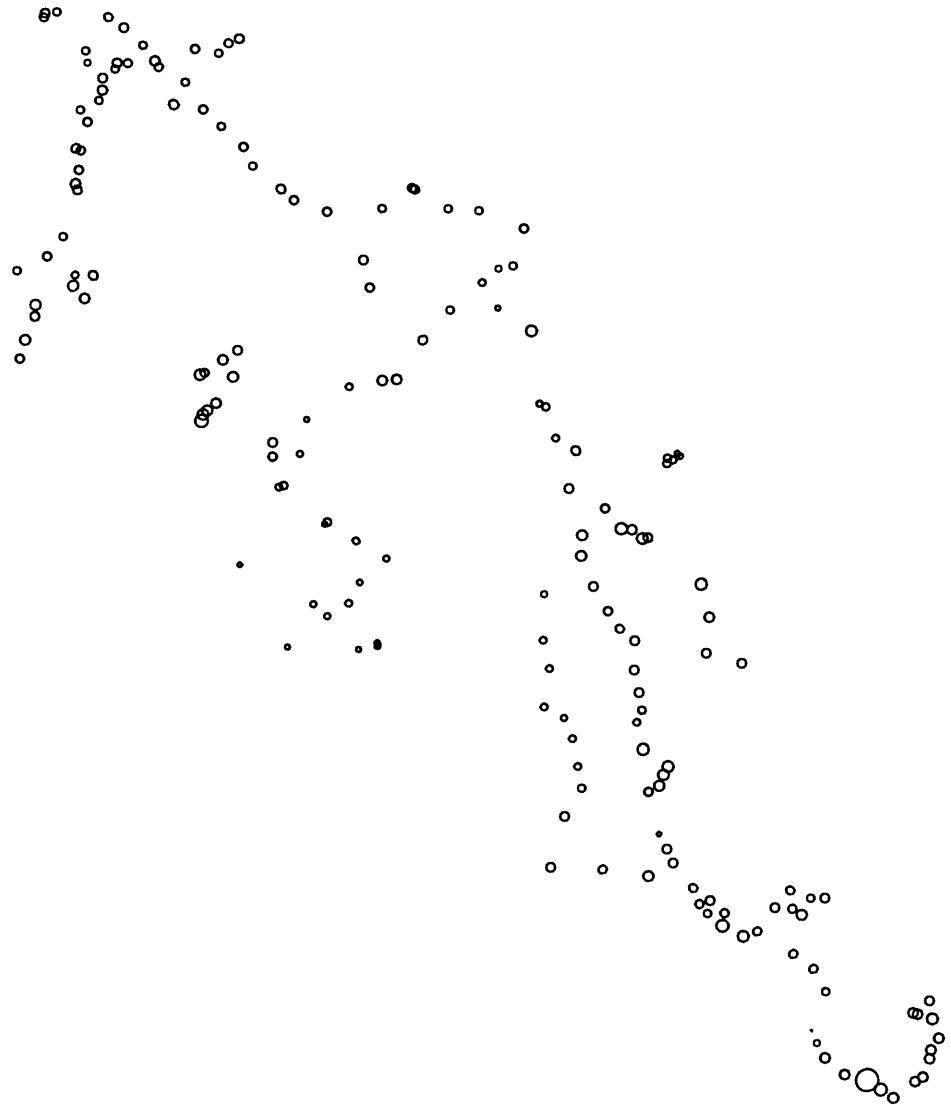
35°30'N
+ 116°15'W

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Factor 8

+



+

35°30'N
116°15'W +

DEATH VALLEY NATIONAL MONUMENT

+ 37°20'N
+ 117°45'W

Proportional Symbol Plot - Factor 9 +



+

35°30'N
+ 116°15'W +